

UNITED STATES DISTRICT COURT
DISTRICT OF NEW HAMPSHIRE

IN THE MATTER OF THE
ADMINISTRATIVE WARRANT

In re: E.J. ABBOTT MEMORIAL SITE
Parcel ID: Lot J, 103 and 104-02
Wilton, New Hampshire

Case No. _____

***EX PARTE* APPLICATION FOR AN ADMINISTRATIVE
WARRANT UNDER CERCLA SECTION 104(e)**

The United States of America, on behalf of the United States Environmental Protection Agency (“EPA”), applies for an *ex parte* civil administrative warrant under Section 104(e) of the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), 42 U.S.C. § 9604(e). EPA seeks access to property totaling 0.13 acres located at Burns Hill Road (Parcel ID: Lot J, 103 and 104-02), Town of Wilton, New Hampshire (the “E.J. Abbott Memorial Site” or “Site”) in order to conduct a preliminary assessment and investigation to determine the extent to which the risk of release of hazardous substances on the Site poses a threat to the public health or the environment.

EPA seeks in particular to enter in, or upon, the Site, for a period of 180 days, to

- (1) conduct site walks to determine whether any hazardous substances are visibly present;
- (2) survey the Site and take measurements of the topography of the Site to obtain information relevant to the selection of sampling locations on the Site;
- (3) document and photograph conditions at the Site;
- (4) collect soil, sediment, water and air samples, as necessary;
- (5) sample any solids or liquids stored or disposed of on-site;
- (6) drill or excavate holes for investigation of conditions under the ground surface; and
- (7) take other actions related to the investigation of

surface or subsurface contamination resulting from the release or threat of further releases at the Site.

In support of this application, the United States submits the accompanying Memorandum in Support of the *Ex Parte* Application for Administrative Warrant, together with the Affidavits of EPA's On-Scene Coordinator Karen Way and EPA's Paralegal Specialist Diane Boudrot.

A proposed Administrative Warrant is also submitted for the Court's convenience.

Respectfully submitted,

Henry S. Friedman
Assistant Section Chief
Environmental Enforcement Section
Environment and Natural Resources Division
United States Department of Justice

Dated for 6/23/2022

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UNITED STATES DISTRICT COURT
DISTRICT OF NEW HAMPSHIRE

IN THE MATTER OF THE
ADMINISTRATIVE WARRANT

In re: E.J. ABBOTT MEMORIAL SITE
Parcel ID: Lot J, 103 and 104-02
Wilton, New Hampshire

Case No.

MEMORANDUM IN SUPPORT OF
UNITED STATES' *EX PARTE* APPLICATION FOR AN
ADMINISTRATIVE WARRANT UNDER CERCLA SECTION 104(e)

The United States of America, on behalf of the United States Environmental Protection Agency (“EPA”), applies *ex parte* for an administrative warrant under Section 104(e) of the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), 42 U.S.C. § 9604(e), to enter property totaling approximately 0.13 acres located at Burns Hill Road (Parcel ID Lot J, 103 and 104-02), Town of Wilton, the County of Hillsborough, New Hampshire (the “E.J. Abbott Memorial Site” or “Site”) to determine whether the Site poses a threat of release of hazardous substances. Currently, the Site is essentially vacant unused land. Exhibit A hereto, Affidavit of Diane Boudrot (“Boudrot Aff.”) ¶9, Exhibit 1 (Site Map);¹ Exhibit B hereto, Affidavit of Karen Way (“Way Aff.”) ¶5.²

The United States seeks the warrant so that EPA may enter the Site during a period of 180 days to investigate and characterize hazardous substances contamination on the property. Way Aff. ¶12. Specifically, under Section 104(e) of CERCLA, 42 U.S.C. § 9604(e), EPA seeks

¹ Ms. Boudrot has been employed by EPA for 30 years and has been in her current position as a Paralegal Specialist for 25 years. Boudrot Aff. ¶3.

² Ms. Way has been employed by EPA for 21 years and has been in her current position as an On-Scene Coordinator for 13 years. Way Aff. ¶3.

to conduct an initial preliminary assessment and site investigation (“PA/SI”) to determine whether the presence of hazardous substances on the Site pose a threat to public health or the environment. *Id.* ¶¶11-12.

The Site’s owner of record is the E.J. Abbott Memorial Trust, Inc. (“the Trust”), a dissolved or non-functioning trust. Boudrot Aff. ¶6. Mary Abbott, the sole trustee of the Trust, died in 2009. EPA researched potential heirs to the Trust, but has been unable to locate any living heirs, or any other person who will claim ownership of the property and provide consent to access. *Id.* ¶¶6-10.

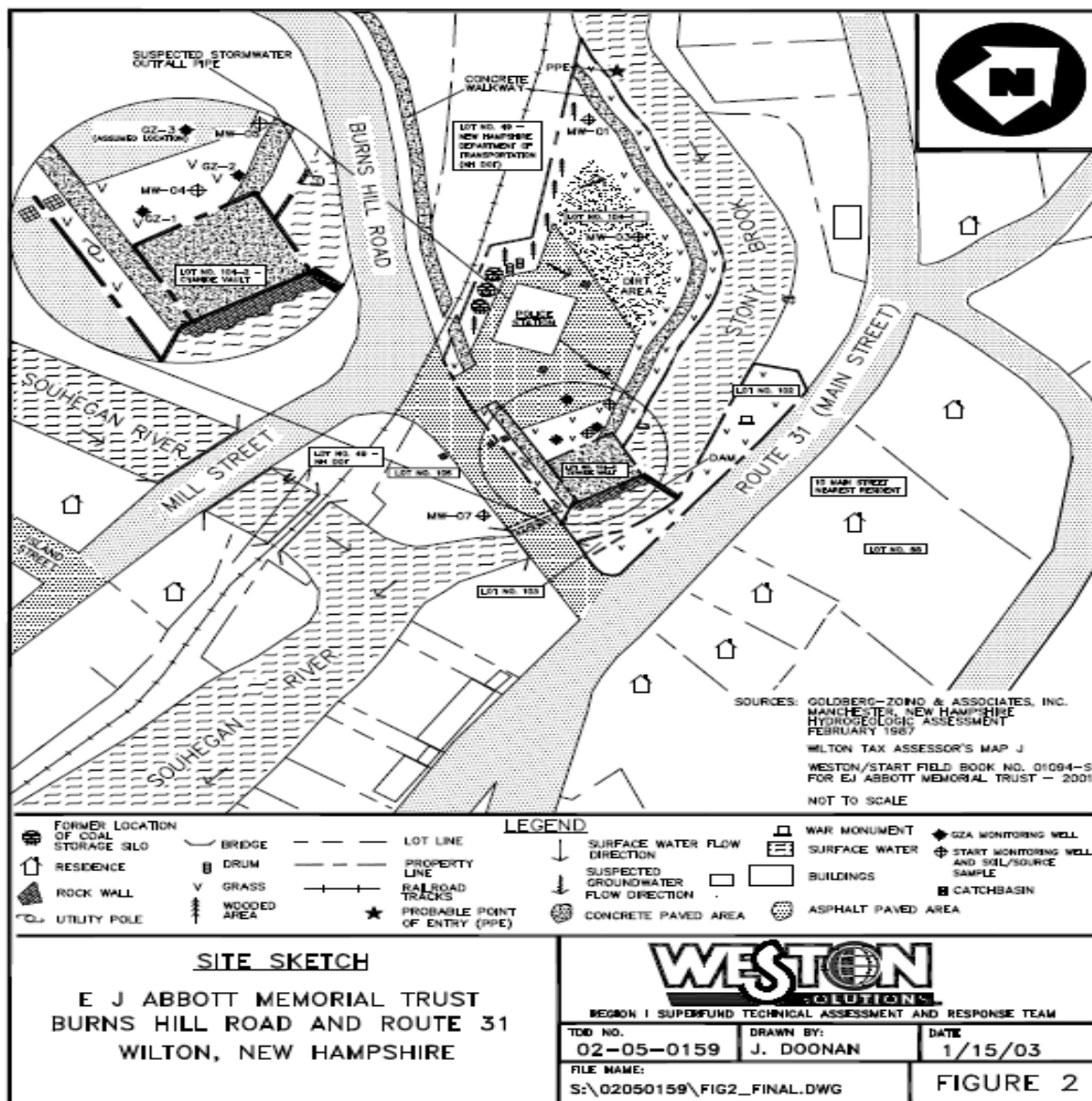
The United States respectfully requests that the Court issue a warrant because: (1) the United States is authorized under Section 104(e) of CERCLA to enter the Site and conduct the planned actions but has not been able to obtain the owner’s authorization for access; (2) the Court is authorized under CERCLA to issue the requested warrant; and (3) such a warrant is justified because contamination on the Site may pose a threat to public health or the environment and EPA cannot make this determination without the requested warrant. Way Aff. ¶¶11-17. The New Hampshire Department of Environmental Services (“NHDES”) also requests that EPA conduct a preliminary assessment and site investigation. *Id.* ¶11.

Accordingly, by its Application and this supporting Memorandum, with accompanying Affidavits of Diane Boudrot and Karen Way, the United States seeks to enforce its authority under CERCLA for entry and access to the Site to determine the extent to which current conditions on the Site pose a danger to the public health and/or the environment. As set forth in more detail below, the Court should issue the requested warrant to the United States, on behalf of EPA.

I. FACTUAL BACKGROUND

A. Site Background

The Site consists of two parcels, Lot J, 103 and 104-02, totaling approximately 0.13 acres and is located at Burns Hill Road, in the Town of Wilton, County of Hillsborough, New Hampshire. Boudrot Aff. ¶1. The Site features a concrete surface walkway and retaining wall, but is otherwise essentially vacant unused land. Way Aff. ¶5. A concrete structure may have contained the former water wheel over Stony Brook and an adjacent dam that underlies a portion of the walkway at Lot J, 104-02. The structure is the location of the historical disposal of sodium cyanide wastes that were generated at the nearby Abbott Machine Company. Six 55-gallon drums and four furnace boxes containing spent sodium cyanide-case hardening solution were reportedly disposed in the structure circa 1964. *Id.* ¶6. In sum, the release or threat of release of hazardous substances may exist on the Site due to the current condition of the Site and the disposal of sodium cyanide waste in the subsurface concrete structure. *Id.* ¶¶ 7-10. The figure below depicts the Site location, including its relation to Stony Brook and the Souhegan River.



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24 March 2003

In 1986, Goldberg-Zoino & Associates, Inc (GZA) was contracted by the Trust to assess environmental conditions in the vicinity of the sodium cyanide waste disposal area. Assessment activities included the installation of monitoring wells and collection of soil and groundwater samples from Stony Brook. Ammonia and cyanate were detected in the surface water samples.

GZA recommended continued groundwater monitoring, but such activities were not completed. *Id.* ¶7.

In 2003, Weston Solutions, Inc., on behalf of EPA, completed some preliminary assessment/site investigation activities that included the installation of monitoring wells and collection of soil and groundwater samples in the vicinity of the disposal area, as well as sediment samples from Stony Brook and the Souhegan River. The final report indicated cyanide was detected in one groundwater sample collected hydraulically upgradient of the sodium cyanide waste disposal area and in a soil sample collected from a rock wall located immediately downgradient of the disposal area adjacent to Stony Brook. *Id.* ¶8.

According to the Agency for Toxic Substances and Disease Registry, “exposure to lower levels of cyanide may result in breathing difficulties, heart pains, vomiting, blood changes, headaches, and enlargement of the thyroid gland.” In terms of the environment, “at the high concentrations, cyanide becomes toxic to soil microorganisms.” *Id.* ¶9(b).

B. EPA Needs Access To The Site To Assess Whether Cleanup Is Necessary

A Phase One Environmental Site Assessment report (dated October 1, 2020), prepared on behalf of the Nashua Regional Planning Commission and the Town of Wilton, concluded that a threat of release to the environment exists at the Site due to the disposal of sodium cyanide waste in the subsurface concrete structure. The report’s conclusion is not based on new measurements, and instead relies upon existing sampling data. The report recommends further environmental assessment to confirm or dismiss the identified risk. *Id.* ¶10.

On September 27, 2021, the NHDES requested assistance from the EPA Removal Program to perform additional assessment activities on the Site. NHDES requested EPA’s assistance to determine whether any hazardous substances remain on the Site that constitute a

release, or threat of release, to the environment. *Id.* ¶¶11-13. EPA needs access to the Site to collect data and information to assess whether a response action is necessary to address potential public health or environmental hazards at the Site, including risks posed by the historical disposal of cyanide. *Id.* ¶¶11-13.

C. EPA Sought Permission To Access The Site

EPA performed research to verify the ownership of the Site property in an effort to gain the owner's permission to access the Site. Boudrot Aff. ¶5. EPA's efforts included reviewing Town tax assessment records, the registries of deeds, environmental reports about the Site, the New Hampshire Secretary of State's online data base, online obituaries, and correspondence with Town officials. *Id.* ¶¶5-9.

The parcels listed as Lot J, 103 and 104-02 are described in a 1961 deed transferring the property to E.J. Abbott Memorial Trust, Inc., and the Trust remains the current owner of the parcels. Boudrot Aff. ¶6. On December 29, 1950, the Trust was formed. According to the Wilton Tax Assessor's Office, Mrs. Mary Abbott of Hollis, NH, is the sole trustee of the Trust. *Id.* ¶¶7. The New Hampshire Secretary of State's Office lists the dissolution date of the Trust as of February 1, 1991, and the Town has not collected taxes for the parcels since that date. However, EPA has been unable to locate any records documenting that the Trust was formally dissolved. *Id.* The Town of Wilton reports it never received transfer information from the registry of deeds, so the parcels remain in the name of Mary Abbott, as sole trustee of the Trust. *Id.* On September 7, 2009, Mary Abbott died. *Id.* ¶8. Her husband and her son have also died, and it is unknown if there are any surviving heirs. *Id.* The Town does not collect taxes for either parcel due to the parcels' uncertain or unknown ownership status. *Id.*

EPA has been unable to locate any person who will claim ownership of the property, or who will grant EPA access to the Site. Boudrot Aff. ¶10.

II. DISCUSSION

A. Legal Standard

Congress enacted CERCLA, 42 U.S.C. §§ 9601-9675, in response to widespread concern over the severe environmental and public health effects arising from the improper disposal of hazardous wastes and other hazardous substances. *See Key Tronic Corp. v. United States*, 511 U.S. 809, 814 (1994); *Dedham Water Co. v. Cumberland Farms Dairy, Inc.*, 805 F.2d 1074, 1078, 1081 (1st Cir. 1986); *Eagle Picher Indus. v. EPA*, 759 F.2d 922, 925-26 (D.C. Cir. 1985). EPA has broad authority to investigate and clean up hazardous waste sites and to enter such sites for those same purposes. *See* Sections 104(a), (b) and (e) of CERCLA, 42 U.S.C. §§ 9604(a), (b) and (e). Section 104(e)(1) authorizes the President, or any duly delegated representative, to exercise the access authority of Section 104(e) for the broad purposes “of determining the need for response, or choosing or taking any response action under [CERCLA], or otherwise enforcing the provisions of [CERCLA].”³ 42 U.S.C. § 9604(e)(1).

CERCLA defines “response” to mean “remove, removal, remedy, and remedial action.” 42 U.S.C. § 9601(25). A “removal” action is “the cleanup or removal of released hazardous substances from the environment,” and may include “such actions as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances.” 42 U.S.C. § 9601(23). Section 104(b) of CERCLA specifically provides EPA with authority to undertake “investigations, monitoring, surveys, testing, and other information gathering” as EPA deems necessary or appropriate to identify the existence and extent of release or threat of release of

³ The President has delegated his authority under Section 104 of CERCLA to EPA. Exec. Order No. 12580, §§ 2(g) and (i), 52 Fed. Reg. 2923, 2925 (1987).

hazardous substances, pollutants or contaminants at or from a site, and the extent of danger to the public health or welfare or to the environment. 42 U.S.C. § 9604(b).

Under Section 104 of CERCLA, EPA and its representatives are authorized to enter property to conduct response activities when EPA determines that “there is a reasonable basis to believe there may be a release or threat of release of a hazardous substance or pollutant or contaminant.” 42 U.S.C. § 9604(e)(1).⁴ Once EPA determines that grounds exist for entry, its authority to enter and access is far reaching. Section 104(e)(3) authorizes EPA and its representatives to enter any vessel, facility,⁵ or establishment associated with a release or threat of release of hazardous substances, including property where entry is needed to determine the appropriate response or to effectuate a response action. 42 U.S.C. § 9604(e)(3). Section 104(e)(6) authorizes EPA to secure such access in any lawful manner. 42 U.S.C. § 9604(e)(6).

Courts interpret Section 104(e) of CERCLA to provide for the warrant authority that is sought in the instant application. *See In re Yoder’s Slaughterhouse Site*, 519 F. Supp. 2d 574, 578-79 (D. Md. 2007); *see also Koppers Indus. v. EPA*, 902 F.2d 756, 758 (9th Cir. 1990) (denying as moot appeal from district court’s denial of motion to quash warrant issued under CERCLA Section 104(e)). The present circumstances are similar to those in *In re Yoder’s*

⁴ Section 101(22), 42 U.S.C. § 9601(22), defines “release” to mean “any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant).”

⁵ Section 101(9), 42 U.S.C. § 9601(9), defines “facility” as:

(A) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.

Slaughterhouse, where EPA had applied for an *ex parte* administrative warrant after it was unsuccessful in its attempts to identify the owners of the targeted property. 519 F. Supp. 2d at 576-77. The court found that the issuance of an administrative warrant was appropriate: “where Congress has given power to an agency to enter and make inspections, the agency *ipso facto* is empowered to seek a warrant.” *Id.*, at 579 (citing *Boliden Metech, Inc. v. United States*, 695 F. Supp. 77, 82 (D.R.I. 1988)).

Not only are warrants appropriate, but courts have determined that EPA may obtain them on an *ex parte* basis. In the case of *In re Bunker Hill Co. Lead & Zinc Smelter v. U.S. EPA*, 658 F.2d 1280, 1285 (9th Cir. 1981), the Ninth Circuit rejected Bunker Hill’s objection to the issuance of an *ex parte* inspection warrant and affirmed that federal agencies have the ability to obtain *ex parte* warrants to conduct inspections, citing *Stoddard Lumber Co. v. Marshall*, 627 F.2d 984 (9th Cir. 1980) (concerning OSHA inspection warrants issued to the Department of Labor). It is especially appropriate that EPA seek access through an *ex parte* warrant where, as here, EPA has tried diligently to find someone to receive service and grant access on behalf of the owner of the property, but has been unable to find anyone to do so. *Boudrot Aff.* ¶¶ 8-9.

B. EPA Has Shown That There Is a Reasonable Basis For The Issuance of a Warrant

Under CERCLA Section 104(e), the standard for determining whether a court may issue an administrative warrant for access is whether “there is a reasonable basis to believe there may be a release or threat of release of a hazardous substance or pollutant or contaminant.” *United States v. Fisher*, 864 F.2d 434, 437 (7th Cir. 1988). The standard for cause justifying the issuance of an administrative warrant is less rigorous than a search and seizure warrant in a criminal investigation, and requires only a showing of either “specific evidence of an existing violation” or “reasonable legislative or administrative standards” for conducting a particular

inspection. *Marshall v. Barlow's, Inc.*, 436 U.S. 307, 320 (1978) (quoting *Camara v. Municipal Court*, 387 U.S. 523, 538 (1967)). Where “a valid public interest justifies the intrusion contemplated, then there is probable cause to issue a suitably restricted search warrant.” *Camara*, 387 U.S. at 539 (citing *Okla. Press Pub. Co. v. Walling*, 327 U.S. 186 (1946)).

A reasonable basis exists to believe that a release of hazardous substances, or the threat of such a release, exists at the Site. Way Aff. ¶11. A Phase 1 Environmental Site Assessment report (dated October 1, 2020), prepared on behalf of the Nashua Regional Planning Commission and the Town of Wilton, noted, based upon historical information, a threat of release to the environment due to the disposal of sodium cyanide waste in a concrete structure underlying a concrete walkway associated with the historical use of a waterwheel at the Site. *Id.* ¶9(a). The sodium cyanide wastes are believed to have been generated at the nearby Abbott Machine Company. Six 55-gallon drums and four furnace boxes containing spent sodium cyanide-case hardening solution were reportedly disposed in the structure circa 1964. Prior environmental assessment activities completed at the Site in 1986 and 2001-2002 found ammonia and cyanate in surface water samples, and cyanide in soil collected from a rock wall located immediately downgradient of the disposal area adjacent to Stony Brook. *Id.* ¶¶7-8. NHDES requested assistance from EPA in undertaking additional assessment activities on the Site to determine whether the release or threat of release of hazardous substances pose a risk to human health or the environment *Id.* ¶10.

The period during which EPA intends to perform the preliminary assessment and Site investigation at the Site is limited to 180 days. *Id.* ¶13. During the PA/SI, EPA personnel and their contractors would (1) conduct site walks; (2) survey the Site and take measurements of the topography of the Site to obtain information relevant to the selection of the sampling locations

on the Site; (3) document and photograph conditions on the Site; (4) collect soil, sediment, water and air samples if necessary; (5) sample any solids or liquids stored or disposed of on-Site; (6) drill or excavate holes for investigation of conditions under the ground surface; and (7) take other actions related to the investigation of surface or subsurface contamination resulting from the release or threat of further releases at the Site. *Id.* ¶¶12-13. These measures are necessary to assess the extent of hazardous substance contamination at the Site and to determine whether a response action may be needed to address any risks posed by the contamination. *Id.* ¶12.

The 180 days is needed because the Site includes various areas which may contain contamination including, but not limited to, a concrete surface walkway and retaining wall, former water wheel of an adjacent dam that underlies a portion of the walkway, and the riverbanks that surround this adjacent dam. *Id.* ¶¶6-9(a). For example, the area around the Stony Brook dam may require some sampling of sediments in and around the dam and on the surrounding banks. This kind of Site sampling can add additional complexities and time to the task of sampling and assessing risk. *Id.* ¶15. The 180-day time period is also needed to develop a Sampling and Analysis Plan, a Site Specific Health and Safety Plan, and to arrange for laboratory services. *Id.* ¶13. The requested time also allows for evaluation of initial sample results and other investigatory work that may indicate that additional sampling or other investigatory work is needed, unanticipated or complicating weather conditions, or potential delays due to COVID-19 related circumstances. *Id.* ¶14, 16. Overall, the PA/SI work may entail an iterative process of sampling, laboratory analysis, and evaluation. The access requested is only minimally intrusive given that the Site is currently vacant, unused and unoccupied. *Id.* ¶5; Boudrot Aff. ¶9. Thus, there will be no interference with any ongoing activity at the Site. In

light of these facts and the valid public interest to be served by EPA's entry onto the Site, the issuance of an administrative warrant is justified.

C. The Court Should Issue The Warrant *Ex Parte*

Administrative agencies "may obtain . . . warrants *ex parte* even when surprise is not necessary." *Bunker Hill Co. Lead and Zinc Smelter*, 658 F.2d at 1285; accord *In re Stanley Plating Co.*, 637 F. Supp. 71, 72 (D. Conn. 1986) (*ex parte* warrant under Resource Conservation and Recovery Act); *In re Order Pursuant to Section 3013(d) RCRA*, 42 U.S.C. § 6934(d), 550 F. Supp. 1361 (W.D. Wash. 1982) (same). One court has even recognized that "*ex parte* proceedings are the normal means by which warrants are obtained in both criminal and administrative actions." *National-Standard Co. v. Adamkus*, 881 F.2d 352, 363 (7th Cir. 1989). In this case, issuance of an *ex parte* warrant is both necessary and justified. EPA has made reasonable efforts to obtain permission to enter the Site, including by attempting to locate any known heirs, or trustees of the Trust, the current owner of the Site. *Boudrot Aff.* ¶¶5-9. At this time, an *ex parte* warrant appears to be the only way in which EPA can obtain proper authorization to access the Site to ensure public safety is not at risk.

III. CONCLUSION

For the reasons stated above, the United States respectfully requests that this Court issue the proposed *ex parte* administrative warrant authorizing EPA and its representatives to enter the Site for the purposes identified in the warrant.

Respectfully submitted,

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Assistant Section Chief
Environmental Enforcement Section
Environment and Natural Resources Division
United States Department of Justice

Dated for 6/23/2022

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EXHIBIT A

**UNITED STATES DISTRICT COURT
DISTRICT OF NEW HAMPSHIRE**

**IN THE MATTER OF THE
ADMINISTRATIVE WARRANT**

**In re: E.J. Abbott Memorial Trust
Parcel ID J, 103 and 104-02
Wilton, New Hampshire**

Case No.

AFFIDAVIT OF DIANE BOUDROT

I, Diane Boudrot, hereby make the following affidavit:

1. I am employed by EPA as a paralegal specialist and I am currently assigned to the E.J. Abbott Memorial Trust Site (“Site”), located in the Town of Wilton, New Hampshire. I have been employed by EPA for 30 years and have been in my current position as a paralegal for 25 years.
2. As a paralegal for the Site, my responsibilities, among other things, include researching ownership information with respect to Superfund sites, including the E.J. Abbott Memorial Trust Site. In particular, I am involved in efforts to gain access to the Site to determine whether there has been a release or threatened release of hazardous substances into the environment at or from the Site and for implementation of response actions at the Site. These actions are undertaken pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), 42 U.S.C. § 9601, *et seq.* I have set forth below efforts I have made as a paralegal to obtain written access to the Site.

3. I make this Affidavit in support of the United States' *Ex Parte* Application for an Administrative Warrant for Access to the property lots J, 103 and J, 104-02, located on Burns Hill Road ("the Site"), consisting of 0.13-acres. A copy of the Site map is attached hereto as Exhibit 1, Site Map.
4. The statements in this Affidavit are based on my personal knowledge; on my experience as a Paralegal Specialist for the United States Environmental Protection Agency ("EPA"); on knowledge I gained from reviewing files and documents regarding the Site that are in the possession of New Hampshire Department of Environmental Services ("NHDES"), EPA, and the Town of Wilton; on knowledge I gained from reviewing publicly available information; such as information contained within the Hillsborough County Registry of Deeds; Town of Wilton assessor's database, New Hampshire Secretary of State's database, newspaper articles; and on knowledge I gained during discussions with representatives of EPA and Town of Wilton officials.

Efforts to Obtain Access to the Site

5. I performed research to determine and verify the ownership of the Site property in an effort to gain voluntary access from the property owner. Checking assessment records and registries of deeds is a typical step I take in determining and verifying ownership of property.
6. The parcels listed as Lot J, 103 and 104-02 are described in the 1961 deed to E.J. Abbott Memorial Trust, Inc. ("the Trust"), recorded in the Hillsborough County Registry of Deeds at Book 1638, page 363. *See* Exhibit 2, Deed. According to records I reviewed of the Town of Wilton, NH online database, and email

correspondence with the Clerk and Collector for the Town of Wilton property taxes, the Trust is the current owner of the parcels. *See* Exhibit 3, Town of Wilton property cards; Exhibit 4, Town of Wilton April 2022 email correspondence; Exhibit 8, 2003 Assessment Report, p. 1.

7. On December 29, 1950, the Trust was formed and its principal office address was listed as 16 Atlantic Ave., N. Hampton, NH. *See* Exhibit 5, NH Secretary of State datasheet. According to the Town of Wilton Tax Assessor's Office, Mrs. Mary Abbott of Hollis, NH, is the sole trustee of the Trust. Exhibit 8, 2003 Assessment Report, p. 1. The New Hampshire Secretary of State's Office lists the dissolution date of the Trust as of February 1, 1991. Exhibit 5, NH Secretary of State datasheet. However, I am unable to locate any records documenting that the Trust was formally dissolved. According to Jennifer Beck, Chair of Wilton Economic Development Team and the Wilton Conservation Commission, the parcels were owned by the Trust and the Trust was dissolved without fulfilling its dissolution requirements. *See* Exhibit 6, 2020 Assessment Report, Appendix C. The Town of Wilton reports it never received transfer information from the registry of deeds so the parcels remain in the name of Mary Abbott, as sole trustee of the Trust. *See* Exhibit 8, 2003 Assessment Report, p. 1.
8. On September 7, 2009, Mary Abbott died. *See* Exhibit 7, Obituaries and online gravesite, pages 1-2. I have been unable to locate any surviving heirs. My research found an obituary for Samuel L. Abbott, Jr., Mary Abbott's son, and a gravesite marker for Samuel L. Abbott, Mary Abbott's husband. *See* Exhibit 7, Obituaries and online gravesite, pages 3-5.

9. On February 9 and February 11, 2022, I sent an email message to representatives of the Town of Wilton, NH and Jane Farrell Clerk/Collector for the Town of Wilton, respectively to obtain information about the current ownership of the Site. Consistent with the parcels' uncertain or unknown ownership status, the Town does not collect taxes for either parcel, and the property is essentially unused. *See* Exhibit 9, February 2022 email correspondence. Through email communication with Ms. Farrell, including a link she provided to supporting historical town documentation, I learned that in September 1991, Lot J-104 was subdivided into Lot J-104-01 and Lot J-104-02. The planning board approved of the subdivision with the condition that no use or improvements be made on Lot J-104-02 due to the documented sodium cyanide disposal. Ms. Farrell explained that the town tax records show the property, per Select Board vote, was approved to be tax exempt beginning in 2007. Further tax records show that all billing from 1991-2006 were abated by the respective Selective Boards. *Id.* It is my understanding based on online research that taxes for Lot J -103 have also been abated by the Town. *See* Exhibit 10, tax redemption documents for parcel J-103.

CONCLUSION

10. Based on the facts outlined above, it is my belief that record ownership of the Site remains in the name of the Trust, a trust whose sole trustee has been deceased since 2009, without any known surviving heirs. Accordingly, the Trust is essentially either dissolved or no longer functioning, and EPA is presently unable to locate any person who will claim ownership of the property, or who will grant EPA access to the Site.

11. I am not aware of anyone in the Town or otherwise who might oppose EPA access to the Site for the purpose of determining whether hazardous substances on the Site present a threat to human health or the environment.

I, Diane Boudrot, declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

/s/ Diane Boudrot
Diane Boudrot
Paralegal Specialist
U.S. EPA, Region I

The affiant appeared before me by telephonic conference on this date and affirmed under oath the content of this affidavit and application.

Date: 6/23/2022





U.S. Magistrate Judge

EXHIBIT 1



DRAWN BY: GWK		DATE: 8/3/2020		<div><div><div>FIGURE 2</div><div>DETAILED SITE PLAN</div></div><div>E.J. ABBOTT MEMORIAL TRUST SITE</div><div>BURNS HILL ROAD</div><div>WILTON, NEW HAMPSHIRE</div></div>				2002 SOIL BORING		1986 SURFACE WATER SAMPLE		SITE BOUNDARY		<div>NOTES:</div> <div>1. EXISTING CONDITIONS AND FEATURES SHOWN ON THIS PLAN ARE APPROXIMATE AND ARE BASED ON INFORMATION OBTAINED FROM THE TOWN OF WILTON ONLINE GIS DATA, NEW HAMPSHIRE GIS PARCEL LAYER, ORTHO PHOTOS, AND PRIOR ENVIRONMENTAL REPORTS.</div> <div>2. 2002 SOIL BORING, MONITORING WELL, AND SEDIMENT SAMPLE LOCATIONS ARE APPROXIMATED BASED ON A SKETCH OF THE E.J. ABBOTT PROPERTY (NOT TO SCALE).</div> <div>3. ADDITIONAL SEDIMENT SAMPLES WERE COLLECTED FURTHER UPSTREAM (SD-07 AND SD-08) AND FURTHER DOWNSTREAM (SD-01 THROUGH SD-05) ALONG THE STONY BROOK IN 2002.</div>	
CHECKED BY: JRN		PROJECT: 19001538						2002 SEDIMENT SAMPLE		1986 MONITORING WELL		FORMER LOT J-104 EXTENTS			
<div><div><div>Community</div><div>Economy</div><div>Environment</div></div><div><div>Credere Associates, LLC</div><div>776 MAIN STREET</div><div>WESTBROOK, MAINE</div><div>Tel. 207.828.1272</div><div>Fax 207.887.1051</div><div>WWW.CREDERELLC.COM</div></div></div>				2002 SOIL BORING/MONITORING WELL		FORMER MILL BUILDING		PARCEL BOUNDARY							

EXHIBIT 2

← BACK

⌕ EXPAND ALL

⌕ COLLAPSE ALL

WILTON|1638|363

Results

Document No	Document Type	Recorded Date	Party1	Party2	Legals
1638-0363	DEED & VOTE	4/3/1961 7:01:00 AM	DAVID WHITING & SO...	ABBOTT EDWARD J ...	WILTON

📄 1638-0363

4/3/1961 7:01:00 AM

DEED & VOTE

4/3/1961

Ref No:SEE RECORD

B:1638 P:363

Page Count:1

Parties

Party 1:

DAVID WHITING & SONS INC
WHITING DAVID & SONS INC

Party 2:

ABBOTT EDWARD J
MEMORIAL TRUST INC
EDWARD J ABBOTT
MEMORIAL TRUST INC

Legals

WILTON

Additional

Contact

EAC

QUOTED DEED

KNOW ALL MEN BY THESE PRESENTS, that David Whiting, et al., a New Hampshire corporation with a principal place of business in Wilton, New Hampshire, for consideration paid, to wit: to Albert G. Abbott Memorial Trust, Inc., a New Hampshire corporation with a principal place of business in said Wilton, with certain premises, a certain tract of land with the buildings and all land thereon situated in said Wilton and bounded and described as follows:

Beginning at the southerly corner of the premises at a point on the southerly wall of the brick grain warehouse which point is twenty-three (23) feet easterly from the center line of the location now or formerly of the Peterboro Railroad and at right angles thereto, and which point is referred to in the description of the second parcel of land in the deed from Whiting, et al. to Peterboro Railroad recorded at Vol. 416, Page 255 in the Hillsborough County Registry of Deeds;

(1) Thence by the easterly line of said Railroad location by curved and straight lines twenty-three (23) feet distant from the center line of the location and parallel thereto, across the highway now or formerly known as Highland Street easterly of the intersection of the highways now or formerly known as Peterboro Road and Mason Road, three hundred four and three tenths (304.3) feet to a stone bound set in the ground at a point referred to in the description of the third parcel in the deed of Whiting, et al. to Peterboro Railroad above referred to:

- 2 -

pin set in a stone laid in a wall, said pin being the southeast corner of land now or formerly of Myron Hutchinson;

(5) Thence south $43^{\circ} 7'$ east along the edge of Stony Brook, fifty-three and four tenths (53.4) feet to a drill hole in the wall;

(6) Thence south $49^{\circ} 52'$ east along the edge of Stony Brook, one hundred (100) feet to an iron pin set in the wall;

(7) Thence south $50^{\circ} 4'$ east along the edge of Stony Brook, seventy-one (71) feet to a pipe; the last three courses being along the land now or formerly of Isaac S., Charles F., John K., David, Mary E., Mary G. and James S. Whiting and land formerly of the grantor;

(8) Thence southeasterly, northeasterly and easterly along the edge of the mill pond by land formerly conveyed to Draper Fuel Company by this grantor to a point at a southerly corner of said Draper Fuel Company land;

(9) Thence by land now or formerly of Bales and land now or formerly of Joseph Langdell, three hundred forty seven (347) feet to the northeast end of the dam across the southerly end of the mill pond;

(10) Thence down and across the stream south 43° west, eighty-two (82) feet to a point under the bridge across the stream corresponding with the center of the highway above now or formerly known as Highland Street leading over the stream and up the mill hill, so called;

(11) Thence south 83° east, twenty-five (25) feet to the middle of the stream;

(12) Thence south $9^{\circ} 30'$ west, approximately one hundred thirty eight (138) feet to the intersection of the stream and the Souhegan River;

(13) Thence south 80° west up the River about one hundred (100) feet to a point in the middle of the river opposite the point of beginning and forty-one (41) feet therefrom;

(14) Thence forty-one (41) feet to the point of beginning.

Meaning and intending to convey the property conveyed to the grantor by deed of Whiting, et al. which deed is recorded at Vol. 883,

- 3 -

Page 144 in the Hillsborough County Registry of Deeds less the parcels heretofore conveyed by the grantor, together with the benefit of and subject to all the rights, privileges and easements referred to in said deed.

This conveyance is made subject (1) to the right of the grantor to store lumber on the above described premises for a period of one month from the date of this deed and (2) to the lease and option to purchase entered into by the grantor and Wilton Pressed Metals, Inc. in December, 1960. By the acceptance of this deed, the grantee assumes all of the grantor's obligations under said lease and agrees (1) to pay \$ per month out of the rent received under said lease to Harold E. and Esther S. Kennedy of said Wilton, it being the proportionate share of said rent to which they are entitled by virtue of their ownership of the "Cooper Shop" referred to in said lease and (2) to pay all the 1961 taxes on said premises.

IN WITNESS WHEREOF, the said David Whiting & Sons, Inc. has caused this deed to be signed by its duly authorized officer and to be sealed with its corporate seal, this 27 day of March, 1961.

WITNESS:

DAVID WHITING & SONS, INC.

Walter L. Skelton
 State of New Hampshire
 COMMONWEALTH OF MASSACHUSETTS
 WORCESTER, SS.
Hillsborough

By *Lester J. Chaffee*
 Its President

April 3, 1961

Before me, the undersigned officer, personally appeared Leslie J. Chaffee, who acknowledged himself to be the President of David Whiting & Sons, Inc. and known to me or satisfactorily proven to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained, by signing the name of the corporation.

Robert A. Rankin
 Justice of the Peace



CERTIFICATE

EXHIBIT 3

BURNS HILL ROAD**Location** BURNS HILL ROAD**Mblu** J/ / 104/ 02/**Acct#** 000014**Owner** ABBOTT MEMORIAL TRUST, E J**Assessment** \$4,400**Appraisal** \$4,400**PID** 7**Building Count** 1**Current Value**

Appraisal			
Valuation Year	Improvements	Land	Total
2021	\$0	\$4,400	\$4,400
Assessment			
Valuation Year	Improvements	Land	Total
2021	\$0	\$4,400	\$4,400

Owner of Record**Owner** ABBOTT MEMORIAL TRUST, E J**Sale Price** \$0**Co-Owner****Certificate****Address** C/O MARY ABBOTT
PO BOX 904
HOLLIS, NH 03049**Book & Page** 0/0**Sale Date****Instrument** 1N**Ownership History**

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
ABBOTT MEMORIAL TRUST, E J	\$0		0/0	1N	

Building Information**Building 1 : Section 1****Year Built:****Living Area:** 0**Replacement Cost:** \$0**Building Percent Good:****Replacement Cost****Less Depreciation:** \$0**Building Attributes**

Field	Description
Style:	Vacant Land
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Num Kitchens	
Cndtn	
Num Park	
Fireplaces	
Fndtn Cndtn	
Basement	

Building Photo



(<http://images.vgsi.com/photos/WiltonNHPhotos//default.jpg>)

Building Layout

(http://images.vgsi.com/photos/WiltonNHPhotos//Sketches/7_7.jpg)

Building Sub-Areas (sq ft)	<u>Legend</u>
No Data for Building Sub-Areas	

Extra Features

Extra Features	<u>Legend</u>
No Data for Extra Features	

Land

Land Use

Use Code	9900
Description	EX COMMONLAND

Land Line Valuation

Size (Acres)	0.11
Frontage	55

Zone	I	Depth	
Neighborhood	A10	Assessed Value	\$4,400
Alt Land Appr	No	Appraised Value	\$4,400
Category			

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2021	\$0	\$4,400	\$4,400
2020	\$0	\$2,900	\$2,900
2019	\$0	\$2,900	\$2,900

Assessment			
Valuation Year	Improvements	Land	Total
2021	\$0	\$4,400	\$4,400
2020	\$0	\$2,900	\$2,900
2019	\$0	\$2,900	\$2,900

EXHIBIT 4

Jane Farrell

From: Karen Wheeler [totalnotice@comcast.net]
Sent: Monday, April 18, 2022 9:49 AM
To: Jane Farrell
Subject: Abbott Trust Land Off Main & Burns Hill Road

Hi Jane

I found our 2000 records and note that both properties were acquired within a single deed which is recorded at Book 1638, Page 363 and dated 3/29/1961. I tried to download a copy of the deed which ends on Page 366, but the website wasn't cooperating with me. Would only allow me to access the full document 1 page at a time but wouldn't print the single pages . . .

I will continue to try getting a copy for you, but in the meantime, wanted to get the information to you as soon as possible.

Best Regards,

Karen


2000

EXHIBIT 5

Remote Acc... x Begin Onlin... x Rec Land Al... x Document... x J-104 - Go... x EJ Abbott M... x Abbott diss... x QuickStart... x

quickstart.sos.nh.gov/online/BusinessInquire/FilingHistory?businessID=207673

LexisNexis CourtLin... Facebook - TSICCoreMVC Imported From IE Enforcement and C...

 **NEW HAMPSHIRE**
DEPARTMENT OF STATE

SECRETARY OF STATE
David M. Scanlan

Filing History [Back to Home](#)

Business Name	Business ID
EDWARD J. ABBOTT MEMORIAL TRUST, INCORPORATED	60004

Filing#	Filing Date	Effective Date	Filing Type	Annual Report Year
0001761484	02/01/1991	02/01/1991	Withdraw/Dissolve/Cancel	N/A
0001761483	01/02/1986	01/02/1986	Withdraw/Dissolve/Cancel	N/A
0001761482	12/30/1975	12/30/1975	Annual Fee	N/A
0001761481	05/28/1956	05/28/1956	Annual Fee	N/A
0001761480	12/29/1950	12/29/1950	Business Formation	N/A

Page 1 of 1, records 1 to 5 of 5

[Back](#)

NH Department of State, 107 North Main St. Room 204, Concord, NH 03301 -- [Contact Us](#)
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Windows taskbar: 52°F Partly sunny 1:42 PM 4/4/2022

EXHIBIT 6



CREDERE ASSOCIATES, LLC

776 Main Street
Westbrook, Maine 04092
Phone: 207-828-1272
Fax: 207-887-1051

Phase I Environmental Site Assessment E.J. Abbott Memorial Trust Site Burns Hill Road Wilton, New Hampshire

Prepared for and Funded by:

**Nashua Regional Planning Commission
Brownfields Assessment Grant# BF00A00287
30 Temple Street, Suite 310
Nashua, New Hampshire**

On Behalf of:

**Town of Wilton
42 Main Street
Wilton, New Hampshire**



October 1, 2020

In Reference to:
Project No. 19001538

Phase I Environmental Site Assessment

E.J. Abbot Memorial Trust Site, Burns Hill Road, Wilton, New Hampshire

NHDES # 198406003; Project # 39757

October 1, 2020

3. SITE DESCRIPTION

3.1 SITE LOCATION AND LEGAL DESCRIPTION

Parcel Identification:	Map J, Lot 103 and Lot 104-2
Site Owner(s):	E.J. Abbott Memorial Trust
Site Occupant(s):	Abandoned
Site Location:	Burns Hill Road
Zoning:	Industrial
County:	Hillsborough County
USGS 7.5 Minute Quadrangle:	Milford, New Hampshire
Latitude and Longitude:	42.8447410° N Lat., 71.7389660° W Long.

Copies of the Town of Wilton tax assessment cards and property map are included with other supporting documentation in **Appendix G**.

3.2 SITE DESCRIPTION

The 0.13-acre Site consists of two small property lots (Map J, Lots 103 and 104-2) formerly associated with a larger tract, adjacent to the confluence of Stony Brook and the Souhegan River. Lot J-103 is an approximate 0.02-acre triangular shaped parcel located within the Stony Brook channel. A stone retaining wall bounds the eastern edge of the lot, while the Burns Hill Road bridge bounds the southern edge. Lot J-104-2 is an approximate 0.11-acre rectangular parcel located along the western edge of Stony Brook (adjacent to the Burns Hill Road bridge abutment). This lot comprises a concrete surfaced walking path and retaining wall abutting Stony Brook, but is otherwise vacant. An approximate 10-foot-high dam located within Stony Brook and adjacent to the Site served a former mill associated with the Site.

A Site Location Plan has been provided as **Figure 1**, and **Figure 2** depicts pertinent Site features.

3.3 SITE UTILITIES

Utilities do not currently serve the Site; however, a 1991 Site plan shows a 12-inch corrugated metal pipe (CMP) for surface stormwater drainage traversing the southern edge of Lot J-104-2 and discharging into Stony Brook. During Site reconnaissance, the storm drain outlet was observed in the retaining wall along Stony Brook. An excerpt from the 1991 Site plan is included in **Appendix G**.

The areas surrounding the Site are served by municipal water and sewer, and regional electric services.



Phase I Environmental Site Assessment

E.J. Abbot Memorial Trust Site, Burns Hill Road, Wilton, New Hampshire

NHDES # 198406003; Project # 39757

October 1, 2020

APPENDIX C

Interview Documentation



To: Drew, Scott <Scott.Drew@des.nh.gov>

Cc: Jay Minkarah <jaym@nashuarpc.org>

Subject: Wilton Brownfield site

EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

Scott,

Good to know this is still progressing and I assume the review will happen, correct? I assume hard copy records can be scanned for electronic review? We have some electronic records which I sent along in my message to Jen. There's an EPA report in there. And we are in contact with the consultant and the project mgr at NRPC.

The issue is we can't locate the owner. This property was owned by the Abbott Family Trust and that trust was dissolved without fulfilling their dissolution requirements, so we can't get a signature on the consent form for the study.

I'm asking what DES would do in this case, given there may indeed be an issue with contaminants. Also this same entity owns the other lot across the river on the other end of the dam and we suspect they have responsibility for the dam as well. Do you have any records of the dam ownership on Stony Brook between lots J-104-2 and J-103?

JB

Jennifer S. Beck
Chair, Wilton Economic Development Team
Commissioner, Wilton Conservation Commission
NHACC Board, Legislative Committee
Souhegan Sustainability Fair Committee
H. 603 654 5526
M. 603 400 0159

EXHIBIT 7

Mary Abbott Obituary (2009) - P... x

legacy.com/us/obituaries/seacoastonline/name/mary-abbott-obituary?id=25680050

LexisNexis CourtLin... Facebook - TSICCoreMVC Imported From IE Enforcement and C...

Mary J. Abbott

NASHUA — Mary J. Abbott died Monday, Sept. 7, 2009.

Mrs. Abbott was born Dec. 17, 1919, in Charleston, S.C., to Theodore Walsh of Chester, S.C., and Joyce Eloisee Aughtry Walsh of Columbia, S.C.

Mrs. Abbott is survived by her daughters, Joyce Lawton and granddaughter Samantha of Leesburg, Va., Mrs. Elizabeth Beard and her two children, Abby and Thomas, of Camden, S.C., Mrs. Dorothy Delano Levesque and her children, Amanda, Garrett and Adam of Wilton, Mrs. Leslie Haas and her children, Christopher, Alexander and Dana of Mont Vernon, and Mrs. Judith Tamposi and her three children, Melanie, Lauren and Lindsey of Nashua; two sons, Samuel L. Abbott, Jr. and his son, Samuel L. Abbott III, and Edward Dudley Abbott and son, Richard, of Milford; Georgia Marshall and her three children, Tracey, Ian, and Kelly of Newfield; and one great-great-grandson, Henry Lumpkin Echols.

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Mary Abbott Obituary (2009) - P... x

legacy.com/us/obituaries/seacoastonline/name/mary-abbott-obituary?id=25680050

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Sign the Guest Book Send Flowers Share

Mary J. Abbott

Services were held for Mrs. Mary J. Abbott at the Nelson-Michaud Funeral Home, Wilton.

WE REMEMBER: She was the wife of the late Samuel Le Baron Abbott Sr. of Wilton and Little Boar's Head. Miss Walsh and Mr. Abbott were married in Coconut Grove, at Plymouth Congregational Church, Jan. 2, 1944.

Mrs. Abbott is an alumnae of what was formerly Florida State College for Women in Tallahassee, Fla., and the University of Miami in Florida.

In her early years she was a former beauty queen, Miss Miami and Miss Florida; from there she became a Powers Model and landed a contract with 20th Century Fox Studios.

During the war years, she was executive secretary to the commanding officer at the Miami Air Depot in Hialeah, Fla.

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Samuel Abbott Obituary (2016) - x +

legacy.com/us/obituaries/unionleader/name/samuel-abbott-obituary?id=16884739

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Samuel L. Abbott Jr.



Samuel LeBaron Abbott Jr., 65, resident of Milford, NH died August 8, 2016 at the VA Hospital in West Roxbury, MA surrounded by his loving family.

He was born in Boston, MA on December 9, 1950 a son of the late Samuel L. & Mary J (Walsh) Abbott.

Sam made his home in the Milford area for the past seven years, having formerly resided in Greenfield for several years and Wilton, NH for many years. Sam was, as those familiar knew him to be, a very hard working man. He did everything in his power to support and provide for his family. Sam had fond memories of cutting stone at Barretto Granite in Milford NH, as well as tending to the particulars of servicing the Souhegan Woods Golf Course of Amherst, NH. He was a man of many trades, working with everything from lumber to stone, and from golf courses to bounty-hunting.

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Samuel Abbott Obituary (2016) - x +

legacy.com/us/obituaries/unionleader/name/samuel-abbott-obituary?id=16884739

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Sign the Guest Book Send Flowers Share

Samuel L. Abbott Jr.



...Golf Course of Amherst, NH. He was a man of many trades, working with everything from lumber to stone, and from golf courses to bounty-hunting.

While Sam vested most of his energy into striking balance between work, family, and making sure his home in Greenfield had the best lawn in the neighborhood, he maintained his reputation as an avid fisherman throughout his life. In his earlier years, he was akin to building cars, hunting, and always maintaining peak physical fitness. Sam went as far as earning a black belt in the martial art of Shotokan, after what must have been a long and exhaustive course of training. Sam delighted in spending time with his family, especially with his beloved grandson Liam.

Sam was most proud for his honorable service in the United States Marine Corps; a distinguished veteran of the Vietnam War. Testament to the saying, "Once a Marine, always a Marine," he thoroughly exemplified this institution with his every action. Throughout his life, he was incredibly organized and remarkably well-mannered. Sam was the epitome of a gentleman; the type of man who would pull a chair out for a woman without having to think twice.

Family members include his devoted and loving wife of 34 years, Donna (Douglas) Abbott of ...

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Samuel Abbott Obituary (2016) - x +

legacy.com/us/obituaries/unionleader/name/samuel-abbott-obituary?id=16884739

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Sign the Guest Book Send Flowers Share

Samuel L. Abbott Jr.



who would put a chair out for a woman without having to think twice.

Family members include his devoted and loving wife of 34 years, Donna (Douglas) Abbott of Milford, NH; a son Samuel L. Abbott III of Peterborough, NH, as well as his enormously cherished grandson Liam Carter Abbott. His loving and caring siblings include his only brother, Edward Abbott of Lyndeborough, NH; his sisters Leslie (Abbott) Haas of Mont Vernon, NH; Georgia (Abbott) Marshall of Newfields, NH; Judith (Abbott) Tamposi of Hollis, NH; Dorothy (Abbott) Levesque of Wilton, NH; Elizabeth (Abbott) Beard of Camden, SC and Joyce (Abbott) Lawton of Perceville, VA.

Visiting hours are on Sunday, August 14th from 1:00-4:00 p.m. in the Smith & Heald Funeral Home, 63 Elm Street, Milford, NH. Funeral services will be held on Monday at 10:00 a.m. in the funeral home. Burial with military honors will follow in Laurel Hill Cemetery, Wilton, NH. In lieu of flowers, donations in his memory may be made to ALS Association, Northern New England Chapter, The Concord Center, 10 Ferry Street, Suite 438, Concord, NH 03301. Arrangements are in the care of Smith & Heald Funeral Home, Milford. To share a memory or offer a condolence, please go to www.smith-heald.com

Windows taskbar: Raining now 12:36 PM 4/6/2022

Samuel LeBaron Abbott (1915-1976) x


findagrave.com/memorial/109162493/samuel-lebaron-abbott

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 Photo added by Mary Ann

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Samuel LeBaron Abbott

BIRTH 26 Aug 1915
Boston, Suffolk County, Massachusetts, USA

DEATH 12 May 1976 (aged 60)
Nashua, Hillsborough County, New Hampshire, USA

BURIAL [Laurel Hill Cemetery](#)
Wilton, Hillsborough County, New Hampshire, USA [Show Map](#)

PLOT Denny A, Lot 26A

MEMORIAL ID 109162493 - [View Source](#)

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EXHIBIT 8

**FINAL PRELIMINARY ASSESSMENT/SITE INSPECTION REPORT
FOR
E J ABBOTT MEMORIAL TRUST
WILTON, NEW HAMPSHIRE**

Prepared For:
U.S. Environmental Protection Agency
Region I
Office of Site Remediation and Restoration
1 Congress Street, Suite 1100
Boston, MA 02114-2023

CONTRACT NO. 68-W-00-097

CERCLIS NO. NHN000103113
NH DES No. 198406003
TDD NO. 02-05-0159
TASK NO. 4031
DC NO. A-3516

Submitted By:
Weston Solutions, Inc.
Region I
Superfund Technical Assessment and Response Team 2000 (START)
37 Upton Drive
Wilmington, MA 01887

24 March 2003

Region I START 2000
Reviewed and Approved:

Jessica Doonan
Site Leader

Date

Paul H. Schrot
Work Group Leader

Date

QA Review

Date

Work Order No. 20106-001-001-4031-70

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WASTE/SOURCE SAMPLING	10
GROUNDWATER PATHWAY	16
SURFACE WATER PATHWAY	22
SOIL EXPOSURE PATHWAY	34
AIR MIGRATION PATHWAY	35
SUMMARY	37
REFERENCES (references and attachments have been removed)	

**ATTACHMENT A - E J ABBOTT MEMORIAL TRUST PROPERTY
SOIL/SOURCE SAMPLE ANALYTICAL RESULTS
Samples collected by START on 14, 15, and 17 January and
6 February 2002**

**ATTACHMENT B - E J ABBOTT MEMORIAL TRUST PROPERTY
GROUNDWATER SAMPLE ANALYTICAL RESULTS
Samples collected by START on 5 and 6 February 2002**

**ATTACHMENT C - E J ABBOTT MEMORIAL TRUST PROPERTY
SEDIMENT SAMPLE ANALYTICAL RESULTS
Samples collected by START on 5 and 6 February 2002**

**ATTACHMENT D - E J ABBOTT MEMORIAL TRUST PROPERTY
BORING LOGS
START Borings Advanced on 14, 15, and 17 January 2002**

LIST OF FIGURES

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**Final Preliminary Assessment/
Site Inspection Report
E J Abbott Memorial Trust
Wilton, New Hampshire**

**CERCLIS No. NHN000103113
TDD No. 02-05-0159
Work Order No. 20106-001-001-4031-70**

INTRODUCTION

The Roy F. Weston, Inc. (now known as Weston Solutions, Inc.) Superfund Technical Assessment and Response Team 2000 (START) was requested by the U.S. Environmental Protection Agency Region I (EPA Region I), Office of Site Remediation and Restoration to perform a combined Preliminary Assessment/Site Inspection (PA/SI) of the E J Abbott Memorial Trust (E J Abbott) property located along Burns Hill Road in Wilton, New Hampshire. On the basis of historical information indicating that six 55-gallon drums and four containers of sodium cyanide had been disposed of into an underground concrete vault located on the property, the E J Abbott PA/SI was initiated. Tasks were conducted in accordance with the PA/SI scope of work and technical specifications provided by EPA Region I.

Background information used in the generation of this report was obtained through file searches conducted at EPA Region I, New Hampshire Department of Environmental Services (NH DES), telephone interviews with town officials, conversations with persons knowledgeable of the E J Abbott Memorial Trust property, and conversations with other Federal, State, and local agencies.

This package follows the guidelines developed under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, commonly referred to as Superfund. However, these documents do not necessarily fulfill the requirements of other EPA Region I regulations such as those under the Resource Conservation and Recovery Act (RCRA) or other Federal, State, or local regulations. PA/SIs are intended to provide a preliminary screening of sites to facilitate EPA Region I's assignment of site priorities. They are limited efforts and are not intended to supersede more detailed investigations.

SITE DESCRIPTION

The E J Abbott property is located at the junction of Burns Hill Road and Route 31 (Main Street) in Wilton, Hillsborough County, New Hampshire (NH). The 2.2-acre property is identified on the Town of Wilton Tax Assessor's Map J as Lot Nos. 102, 103, 104-1, and 104-2 [11; 49]. The geographical coordinates, as measured from the center of the property, are 42° 50' 27.9" north latitude and 71° 44' 26.3" west longitude (Figure 1) [18]. Vehicular access to Lot No. 104-1 is gained via Burns Hill Road [13, p. 7]. According to the Wilton Tax Assessor's Office, the Town of Wilton owns Lot Nos. 102 and 104-1, and the E J Abbott Memorial Trust owns Lot Nos. 103 and 104-2. Additionally, according to the Town of Wilton, Mrs. Mary Abbott of Hollis, NH, is the sole trustee of the E J Abbott Memorial Trust [11]. According to Mrs. Abbott, she was the President of the "Edward J. Abbott Memorial Trust, Inc.", an entity which had owned the property. However, Mrs. Abbott maintains that this entity was dissolved on 1 February 1991 [55]. The Town of Wilton reports that they have never received transfer information from the Registry of Deeds, so the property remains in Mrs. Abbott's name [11].

The E J Abbott property is located in a residential and commercial area. Lot Nos. 102 and 103 are located on the east bank of Stony Brook, along Route 31. Lot No. 102, which comprises approximately 7,560 square feet (ft²), is currently occupied by a war veterans monument, and grassy and landscaped areas. Lot No. 103 is an empty, triangular-shaped lot adjacent to (south of) Lot No. 102 and has an area of approximately 1,300 ft². Lot No. 104-2 is a rectangular-shaped lot comprising approximately 4,724 ft² (Figure 2). Lot No. 104-2 is located on the west bank of Stony Brook, along Burns Hill Road, and contains a concrete underground “cyanide vault,” in which containers of spent sodium cyanide ash were historically allegedly deposited. Lot No. 104-1, which comprises approximately 83,550 ft², located adjacent to (north of) Lot No. 104-2, is occupied by a 3,200-ft² one-story building operated by the Town of Wilton Police Department, a municipal parking area (a portion of which is asphalt-paved), a band of trees, and a concrete-paved walkway [13, pp. 11-13; 38; 49; 52]. The building is located at the southern end of Lot No. 104-1, approximately 100 ft north of Burns Hill Road and approximately 40 ft east of the railroad tracks. The Town of Wilton completed construction of the building in December 2002, and the Wilton Police are in the process of moving into the building. Lot No. 104-1 is also currently utilized as a parking area by employees of nearby businesses. The Town of Wilton maintains the landscaped areas and plows the parking areas on Lot No. 104-1 [13, p. 13; 38; 52; 56].

Lot Nos. 104-1 and 104-2 are bordered by Stony Brook to the north; Stony Brook to the east; Burns Hill Road to the south; and railroad tracks to the west. A 8,350-ft² commercial property owned by Wilton Main Street Associates (Wilton Associates) is located on Lot No. 105 across Burns Hill Road, south of Lot. Nos. 104-1 and 104-2. Lot No. 102 is bordered by Stony Brook and a private, vacant lot to the north; Main Street to the east; Lot No. 103 to the south; and Stony Brook to the west [13, p. 13; 49]. Lot No. 103 is bordered by Lot No. 102 to the north and east; Burns Hill Road to the south; and Stony Brook to the west. Vehicular and pedestrian access to the property is unrestricted, as portions of it are currently utilized as a public park and a municipal parking area [13, p. 6].

On 21 May 2001, START personnel conducted an on-site reconnaissance of the E J Abbott property as part of the PA/SI. START personnel met Mr. Joe Donovan of NH DES at the E J Abbott property. START personnel did not observe any structures on the property [13, p. 13].

START personnel inspected the property and observed cracks on the surface of the concrete sidewalk in the vicinity of the cyanide vault. In addition, an outfall pipe (assumed to be connected to the municipal stormwater sewer system) to Stony Brook was observed protruding from the area of the cyanide vault. Staining of concrete around the pipe indicated that discharge from the pipe had occurred; however, no discharge from the pipe was observed at the time of the on-site reconnaissance [13, p. 11]. START personnel observed two additional outfall pipes. One outfall pipe is located along the east bank of the Stony Brook north of Lot No. 102. The other outfall pipe is located along the north bank of the Souhegan River east of Mill Street [38]. START personnel observed fishing tackle in Stony Brook adjacent to the cyanide vault [13, p. 12].

START personnel observed two empty, rusted metal 55-gallon drums located near the western boundary of the property, adjacent to (east of) the railroad tracks. Metal debris, including several rusted 5-gallon metal containers, was also observed along the western property boundary, adjacent to the railroad tracks.

One of the 5-gallon containers contained metal railroad spikes; the remaining containers were empty [13, p. 12].

START personnel observed what appeared to be a severely stressed tree, reportedly planted in 1984, located in the vicinity of the cyanide vault. The cause of the stressed vegetation is unknown [13, p. 11].

Stormwater runoff from the E J Abbott property either collects in puddles on the property, flows overland to Stony Brook, or flows into two catchbasins located in the central area of the property. The catchbasins are suspected to be connected to the outfall pipe that discharges to Stony Brook [13, p. 11].

START personnel observed several people parking their vehicles on the property and subsequently walking to nearby businesses. Mr. Donovan reported that young children board and debark a school bus on the property [13, p. 5].

START personnel were unable to locate monitoring wells GZ-1, GZ-2, and GZ-3 during the initial on-site reconnaissance [13, pp. 11-13].

On 15 June 2001, START personnel returned to the E J Abbott property to identify proposed sample locations and to locate and assess the condition of monitoring wells GZ-1, GZ-2, and GZ-3. START personnel located monitoring wells GZ-1 and GZ-2. Both wells were flush-mounted. Neither well was capped, and monitoring well GZ-2 had become filled with soil to a level above the groundwater table. The depth to groundwater measured by START in monitoring well GZ-1 was 13.7 ft below ground surface (bgs). The headspaces of GZ-1 and GZ-2 were screened for volatile organic compounds (VOCs) using a flame ionization detector (FID) and a photoionization detector (PID). No readings above background levels were recorded on either the FID or PID. Monitoring well GZ-3 could not be located. START suspects that GZ-3 has been covered by asphalt paving [13, p. 13].

OPERATIONAL AND REGULATORY HISTORY AND WASTE CHARACTERISTICS

Property usage prior to the early 1900s is unknown. From the early 1900s to approximately 1941, the D. Whiting & Sons Company (D. Whiting) operated a woodworking mill on the property. A mill building was reportedly located in the vicinity of the current parking area. D. Whiting reportedly manufactured wooden crates and boxes used to contain fruit and ammunition. On-site operations included cutting and assembling wood into boxes. Historically, D. Whiting reportedly stored coal in three silos formerly located on the property, adjacent to (east of) the railroad tracks. The quantity of coal stored on the property, and the purpose for which the coal was used, are unknown. In 1941, D. Whiting declared bankruptcy, and woodworking operations at the property ceased. Hazardous materials used and wastes generated, stored, or deposited at the property by D. Whiting are unknown [24].

In approximately 1960, the Whiting mill structure was demolished. In the early 1960s, Abbott Machine Company (AMC), a manufacturer of metal textile machinery whose facility was located on Howard Street in Wilton, approximately 0.5 miles southeast of the E J Abbott property, purchased the property [1, p. 2; 24].

Operations conducted by AMC at their nearby facility included the use of sodium cyanide case-hardening salts for the heat-treating of metal textile machinery parts. Typically, the sodium cyanide solution was used until the cyanide content of the salts had deteriorated to the point where the salts were ineffective in treating the metal parts. Normally, the used salts were removed from the heat treating area and stored in 55-gallon drums at the AMC property prior to removal and off-site disposal. Records indicate that AMC contracted two licensed haulers (Keefe Environmental Services of Epping, NH, and SCA Services of Braintree, Massachusetts) to periodically remove containers of waste sodium cyanide from the property and haul them to an unknown location [19, p. 3].

In about 1964, AMC reportedly disposed of six 55-gallon drums and four “furnace boxes” into the water wheel pit of a former power generating dam (“cyanide vault”) located on a portion of the E J Abbott (*i.e.*, Lot No. 104-2) property, along the western bank of Stony Brook. The drums and furnace boxes contained ash from a spent sodium cyanide case-hardening solution. According to a former employee, the furnace boxes were full and had a volume of approximately 64 cubic feet (ft³). The four furnace boxes combined are estimated to have contained approximately 256 ft³ of ash. Reportedly, disposal of the containers into the cyanide vault involved pouring a 1- to 2-foot (ft)-thick layer of concrete into the excavation; dumping the containers of waste sodium cyanide salts from the tailgate of a pick-up truck into the central portion of the concrete; and subsequently backfilling and sealing the remainder of the excavation with additional concrete [3]. The volume of the cyanide vault has been estimated to measure approximately 29 ft long by 26 ft wide by 8 ft deep [1, p. 2]. The top of the cyanide vault is estimated to be 3 to 4 ft bgs, and is currently covered by a concrete walkway [1, p. 2; 3; 13, p. 11; 17]. According to a former employee of AMC, it is likely that other wastes, including plumbing pipes and remnants of a metallic water wheel, were also disposed of in the cyanide vault. No other wastes are known to have been disposed of on the property [3]. At some point after AMC purchased the property, the size of Lot No. 104-1 was allegedly increased using fill material allegedly from a quarry in Milford, NH [39].

In 1984, a municipal parking area and public park, historically referred to as “E.J. Abbott Memorial Park” or “Abbott Park”, was established on Lot No. 104-1 and Lot No. 104-2 [1, p. 1; 13, p. 6; 17].

On 29 July 1985, Goldberg, Zoino, & Associates, Inc. (GZA), a consultant for E J Abbott, filed a hazardous waste complaint (No. C-85-35) with NH DES regarding the E J Abbott property. The complaint alleged that drums and other containers of cyanide salts were buried in concrete at the E J Abbott property in 1964 [17].

In 1986, GZA, on behalf of E J Abbott, initiated a hydrogeologic assessment of the E J Abbott property. The purpose of the hydrogeologic assessment was to evaluate the environmental conditions in the vicinity of the cyanide vault. On 28 July 1986, a magnetometer survey was conducted on Lot Nos. 104-1 and 104-2 to assess the cyanide vault and the surrounding area for the presence of buried 55-gallon drums. Results of the magnetometer survey indicated the presence of low and constant magnetic gradients on the western side of Lot No. 104-1, and high magnetic gradients on Lot No. 104-2 and on the eastern side of Lot No. 104-1. GZA concluded that the presence of iron or steel objects on the western side of Lot No. 104-1 is unlikely and that it would not be possible to discern small objects such as metal drums on Lot No. 104-2 and on the eastern side of Lot No. 104-1 due to the presence of high magnetic gradients. On 11 and 12 August 1986,

GZA advanced two test borings on the property (GZ-1 and GZ-2) at locations determined using the results of the magnetometer survey. Soil samples were collected from GZ-1 and GZ-2 at unknown depths and field-screened for the presence of VOCs using an organic vapor meter (OVM). No VOCs were detected on the OVM in the soil samples collected from GZ-1 and GZ-2. Two overburden monitoring wells (also identified as GZ-1 and GZ-2) were installed at the locations of GZ-1 and GZ-2 to depths of 24 ft bgs and 27.5 ft bgs, respectively. A “test probe observation well” (GZ-3) was also installed to provide groundwater level data at that location. No known groundwater samples have been collected from this well [1, pp. 3-5].

On 24 August 1986, GZA collected two groundwater samples (also referred to as GZ-1 and GZ-2) from monitoring wells GZ-1 and GZ-2 and two surface water samples (SW-1 and SW-2) from Stony Brook. The samples were submitted to Eastern Analytical, Inc. (EAI) of Concord, NH and analyzed for VOCs, cyanide, cyanate, and ammonia using unspecified methods. According to GZA’s Hydrological Assessment Report, groundwater and surface water samples were analyzed for ammonia and cyanate because they are potential breakdown products of sodium cyanide case-hardening salts. No VOCs were detected in the groundwater or surface water samples. Cyanide was detected in groundwater sample GZ-2 at a concentration of 660 parts per billion (ppb). Cyanate was detected in groundwater at a maximum concentration of 740 ppb in sample GZ-2 and in surface water at a maximum concentration of 100 ppb in sample SW-1. Ammonia was detected in groundwater at a maximum concentration of 1,100 ppb in sample GZ-1 and in surface water at a maximum concentration of 70 ppb in sample SW-2 [1, pp. 7-10]. Refer to Figure 3 for locations of monitoring wells and samples collected by GZA as part of the hydrogeologic assessment.

On 14, 15, and 17 January 2002, as part of the PA/SI, Technical Drilling Services, Inc. (TDS), on behalf of START, advanced seven soil borings and completed five borings as monitoring wells (MW-01 through MW-05) on the E J Abbott property. In addition, TDS advanced one soil boring, completed as monitoring well MW-07, on the Wilton Associates property. START personnel collected nine soil/source samples (SO-01 through SO-08, and SO-10) from the soil borings. The soil/source samples were collected via 2-ft-long split spoons at depths ranging from 5 to 9 ft bgs [13, pp. 26-46]. Refer to Figure 3 for locations of monitoring wells and soil borings. Soil/source samples SO-01 through SO-08 and SO-10 were analyzed through a Delivery of Analytical Services (DAS) laboratory for Target Compound List (TCL) VOCs; and through an EPA Contract Laboratory Program (CLP) laboratory for semivolatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), Target Analyte List (TAL) metals, and cyanide, with the exception of SO-10, which was analyzed for TAL metals only [30-33].

On 5 and 6 February 2002, START personnel collected one soil/source sample (SO-09) from a rock wall below the cyanide vault, and 10 sediment samples (SD-01 through SD-10) from the Souhegan River and Stony Brook. Refer to Figure 3 for locations of sediment samples and the soil/source sample. START personnel also collected seven groundwater samples (GW-01 through GW-07) from MW-01 through MW-05 and MW-07. Sample SO-09 was analyzed through a CLP laboratory for cyanide only. Groundwater samples were analyzed through a CLP laboratory for VOCs, SVOCs, pesticides, PCBs, TAL metals, and cyanide, with the exception of GW-04, which was analyzed for cyanide only [28; 29]. Sediment samples were analyzed through a DAS laboratory for VOCs, SVOCs, pesticides, PCBs, TAL metals, and cyanide, with the exception of SD-04 and SD-08, which were analyzed for TAL metals only [32-34].

For each START sample location, a compound or element is defined as being above reference criteria if it is detected at three times or greater than the reference sample (SO-01 and SO-10 for soil/source samples; GW-01 for groundwater samples; and SD-04, SD-05, SD-07, and SD-08 for sediment samples) concentration. However, if the compound or element is not detected in the reference sample, the reference sample's sample quantitation limit (SQL) (for organic analyses) or sample detection limit (SDL) (for inorganic analyses) is used as the reference value. These compounds or elements have exceeded reference criteria if they occurred at a value equal to or greater than the reference sample's SQL or SDL.

Seven SVOCs, three pesticides, four metals, and cyanide were detected in soil/source samples; one VOC, eight metals, and cyanide were detected in groundwater samples; and one VOC, 18 SVOCs, two pesticides, and two metals were detected in sediment samples above reference criteria [28-34]. Sample results are discussed in greater detail in the Waste/Source Sampling, Groundwater Pathway, and Surface Water Pathway sections of this report.

In December 2002, the Town of Wilton completed construction on a police station located on Lot No. 104-1. According to the Wilton Police, no on-site soil was transported offsite during construction [56]. The building is located at the southern end of Lot No. 104-1, approximately 100 ft north of Burns Hill Road and approximately 40 ft east of the railroad tracks [52].

On 14 January 2003, START personnel conducted an additional on-site reconnaissance to assess the changed site conditions since the construction of the building. START personnel were unable to locate monitoring wells due to the presence of a compacted layer of snow and ice covering Lot No. 105 and the paved portion of Lot No. 104-1. The unpaved portion of Lot No. 104-1 was covered with a 3-ft layer of snow, further impeding the search for monitoring wells. Based on the location of the building, START assumes that monitoring well MW-02 has been destroyed. START assumes that monitoring wells MW-07, on Lot No. 105, and MW-01 and MW-03 through MW-05, on Lot No. 104-1, remain and have not been damaged by the construction of the building [38, pp. 24-25].

Table 1 presents identified structures or areas on the E J Abbott property that are documented or potential sources of contamination, the containment factors associated with each source, and the relative location of each source.

Table 1
Source Evaluation for E J Abbott Memorial Trust

Source Area	Containment Factors	Spatial Location
Cyanide Vault	Encased in concrete. Some cracks were observed in the concrete.	Lot 104-2
Contaminated Fill Material	None.	Entire area of Lot Nos. 104-1 and 105

[3; 13; 30-34]

Table 2 summarizes the types of potentially hazardous substances which have been disposed, used, or stored on the E J Abbott property.

Table 2
Hazardous Waste Quantity for E J Abbott Memorial Trust

Substance	Quantity or Volume/Area	Years of Use/Storage	Years of Disposal	Source Area
Ash from spent sodium cyanide case-hardening solution.	Six 55-gallon drums and four "furnace boxes", each containing approximately 64 ft ² of ash.	1964 to present	1964	Cyanide Vault
Soil contaminated with SVOCs ^a , pesticides ^a , and metals ^a .	Unknown ^b	1960 to present	1960	Contaminated Fill Material

SVOCs = Semivolatile organic compounds.

ft² = Square feet.

^a The specific substances are discussed in detail in the Waste/Source Sampling section of this report.

^b The exact quantity or volume/area of contaminated soil is unknown; however, START assumes it to be less than the combined acreage of Lot Nos. 104-1 (1.9 acres) and 105 (0.2 acres).

[1; 3; 30-34]

There are 49 facilities located within 4 radial miles of the E J Abbott property listed in the Resource Conservation and Recovery Information System (RCRIS) database. There are no properties located within 4 radial miles of the E J Abbott property listed in the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database [8; 9].

WASTE/SOURCE SAMPLING

On 14, 15, and 17 January 2002, TDS, on behalf of START, advanced seven soil borings on the E J Abbott property. TDS also advanced one soil boring on the Wilton Associates property. START personnel collected nine soil/source samples (SO-01 through SO-08, and SO-10) from the soil borings. During advancement, the soil borings were screened with air monitoring equipment and the soil profiles were characterized. Soil borings advanced on Lot No. 104-1, from which samples SO-02 (5 to 7 ft bgs), SO-03 (5 to 9 ft bgs), SO-04 (5 to 9 ft bgs), SO-05 (5 to 9 ft bgs), SO-06 (4 to 8 ft bgs), SO-08 (5 to 9 ft bgs), and SO-10 (5 to 7 ft bgs) were collected, consisted of fill material to a depth of 10 to 15 ft bgs. The soil boring advanced on Lot No. 105, from which sample SO-07 (5 to 7 ft bgs) was collected, consisted of fill material to a depth of 20 ft bgs. The samples were collected via 2-ft-long split spoons at depths ranging from 4 to 9 ft bgs [13, pp. 28-48]. Soil/source samples SO-01 through SO-08 and SO-10 were analyzed through a DAS laboratory for TCL VOCs;

and through a CLP laboratory for SVOCs, pesticides, PCBs, TAL metals, and cyanide, with the exception of SO-10, which was analyzed for TAL metals only. Soil/source samples SO-01 and SO-10 were used to document reference soil conditions.

On 6 February 2002, START personnel collected one soil/source sample (SO-09) from the rock wall below the cyanide vault. Sample SO-09 was analyzed through a CLP laboratory for cyanide analysis only [38, p. 13]. Cyanide was detected in sample SO-09 at a concentration of 4.1 parts per million (ppm) [30]. Table 3 includes a summary of source and soil/source samples collected by START on 14, 15 and 17 January and 6 February 2002.

Table 3

**Sample Summary: Soil/Source Samples Collected by START on
14, 15 and 17 January and 6 February 2002 for E J Abbott Memorial Trust**

Sample Location No.	Traffic Report Nos.	Date/ Time (hours)	Remarks	Sample Depth (feet)	Sample Source
MATRIX: Soil/source					
SO-01	D05331 A0C40 MA0CP5	1/14/02 1112	Grab	5 to 7	Subsurface soil/source sample collected from the boring for MW-01 to document reference conditions. Material is brown, fine-to-medium GRAVEL and fine-to-coarse SAND. FID = 0 units above background; PID = 0 units above background. 42° 50' 41.04" north latitude 71° 44' 23.89" west longitude
SO-02	D05332 A0C41 MA0CP6	1/15/02 0845	Grab	5 to 7	Subsurface soil/source sample collected from the boring for MW-02. Material is brown, GRAVEL and fine-to-coarse SAND. FID = 0 units above background; PID = 0 units above background. 42° 50' 41.60" north latitude 71° 44' 22.68" west longitude
SO-03 (MS/MSD)	D05333 A0C42 MA0CP7	1/14/02 1358	Grab	5 to 9	Subsurface soil/source sample collected from the boring for MW-03. Material is brown, fine-to-coarse GRAVEL and fine-to-coarse SAND. FID = 0 units above background; PID = 0 units above background. 42° 50' 42.44" north latitude 71° 44' 23.69" west longitude

Table 3

**Sample Summary: Soil/Source Samples Collected by START on
14, 15 and 17 January and 6 February 2002 for E J Abbott Memorial Trust (Continued)**

Sample Location No.	Traffic Report Nos.	Date/Time (hours)	Remarks	Sample Depth (feet)	Sample Source
MATRIX: Soil/source (Continued)					
SO-04	D05334 A0CF1 MA0CP8	1/15/02 1235	Grab	5 to 9	Subsurface soil/source sample collected from the boring for MW-04. Material is brown, fine-to-coarse GRAVEL and fine-to-coarse SAND. FID = 0 units above background; PID = 0 units above background. 42° 50' 40.86" north latitude 71° 44' 20.73" west longitude
SO-05	D05335 A0CF2 MA0CP9	1/15/02 1030	Grab	5 to 9	Subsurface soil/source sample collected from the boring for MW-05. Material is brown, fine-to-medium GRAVEL and fine-to-coarse SAND. FID = 0 units above background; PID = 0 units above background. 42° 50' 41.12" north latitude 71° 44' 20.98" west longitude
SO-06	D05336 A0CF3 MA0CQ0	1/17/02 0838	Grab	4 to 8	Subsurface soil/source sample collected from the boring intended for MW-06. Material is brown, fine-to-coarse GRAVEL and fine-to-coarse SAND. FID = 0 units above background; PID = 0 units above background. 42° 50' 40.63" north latitude 71° 44' 20.49" west longitude
SO-07	D05337 A0CF4 MA0CQ1	1/14/02 0925	Grab	5 to 7	Subsurface soil/source sample collected from the boring for MW-07. Material is tan, fine GRAVEL and fine-to-coarse SAND. FID = 0 units above background; PID = 0 units above background. 42° 50' 40.03" north latitude 71° 44' 21.03" west longitude
SO-08	D05338 A0CF5 MA0CQ2	1/15/02 1235	Grab	5 to 9	Field duplicate of SO-04, collected for quality control.

Table 3

**Sample Summary: Soil/Source Samples Collected by START on
14, 15 and 17 January and 6 February 2002 for E J Abbott Memorial Trust (Concluded)**

Sample Location No.	Traffic Report Nos.	Date/Time (hours)	Remarks	Sample Depth (feet)	Sample Source
MATRIX: Soil/source (Concluded)					
SO-09	D05541	2/6/02 1300	Grab	NA	Soil/source sample collected from the rock wall below the cyanide vault (analyzed for cyanide analysis only). Material is tan, fine GRAVEL and coarse SAND. FID = NR; PID = 0 units above background. 42° 50' 40.80" north latitude 71° 44' 20.22" west longitude
SO-10	D05339 A0CF7 MA0CQ4	1/15/02 0940	Grab	5 to 7	Subsurface soil/source sample collected from a boring advanced in the vicinity of MW-01 to document reference conditions for metals analysis only. Material is brown, fine-to-medium GRAVEL and fine-to-coarse SAND. FID = 0 units above background; PID = 0 units above background. 42° 50' 41.04" north latitude 71° 44' 23.89" west longitude

MS/MSD = Matrix Spike/Matrix Spike Duplicate.
 FID = Flame Ionization Detector.
 PID = Photoionization Detector.
 NR = Not Recorded.

[13, pp. 27-46]

Table 4 is a summary of organic compounds and inorganic elements detected through CLP and DAS analyses of START soil/source samples. For each sample location, a compound or element is listed if it is detected at three times or greater than the reference sample concentration (SO-01 and SO-10). However, if the compound or element was not detected in the reference sample, the reference sample's SQL (for organic analyses) or SDL (for inorganic analyses) is used as the reference value. These compounds or elements are listed if they occurred at a value equal to or greater than the reference sample's SQL or SDL and are designated by their approximate relative concentration above these values.

Complete analytical results of START soil/source samples including quantitation and detection limits are presented in Attachment A. Sample results qualified with a "J" on analytical tables are considered approximate because of limitations identified during DAS or CLP data validation. In addition, organic sample results reported at concentrations below quantitation limits and confirmed

by mass spectrometry are also qualified by a “J” and considered approximate.

Complete records of soil boring advancement, including soil profile characterization, are presented in boring logs in Attachment D.

Table 4

**Summary of Analytical Results of Soil/Source Samples
Collected by START on 14, 15, and 17 January and 6 February 2002**

Sample Location	Compound/ Element	Sample Concentration	Reference Concentration	NH S-1	Comments
SO-02	SVOCs				
	Benzo(b)fluoranthene	370 ppb	350 U ppb	7,000 ppb	1.06 × SQL
	Fluoranthene	420 ppb	350 U ppb	810,000 ppb	1.2 × SQL
	Pyrene	450 ppb	350 U ppb	480,000 ppb	1.3 × SQL
	INORGANICS				
	Lead	21.7 ppm	6.9 ppm	400 ppm	3.14 × Ref
SO-03	PESTICIDES				
	DDE, 4,4'-	28 ppb	6.2 ppb	700 ppb	4.52 × Ref
	DDT, 4,4'-	47 J ppb	7.9 ppb	900 ppb	5.95 × Ref
	INORGANICS				
	Calcium	17,200 ppm	460 ppm	NL	37.4 × Ref
SO-06	SVOCs				
	Benzo(a)anthracene	360 ppb	350 U ppb	700 ppb	1.03 × SQL
	Benzo(a)pyrene	420 ppb	350 U ppb	700 ppb	1.2 × SQL
	Benzo(b)fluoranthene	510 ppb	350 U ppb	7,000 ppb	1.5 × SQL
	Chrysene	420 ppb	350 U ppb	70,000 ppb	1.2 × SQL
	Fluoranthene	680 ppb	350 U ppb	810,000 ppb	1.9 × SQL
	Pyrene	620 ppb	350 U ppb	480,000 ppb	1.8 × SQL
SO-07	SVOCs				
	Benzo(a)pyrene	350 J ppb	350 U ppb	700 ppb	1 × SQL
	Benzo(k)fluoranthene	500 J ppb	350 U ppb	7,000 ppb	1.43 × SQL

Table 4**Summary of Analytical Results of Soil/Source Samples Collected by
START on 14, 15, and 17 January and 6 February 2002 (Concluded)**

Sample Location	Compound/ Element	Sample Concentration	Reference Concentration	NH S-1	Comments
SO-07 (Concluded)	SVOCs (Concluded)				
	Fluoranthene	390 ppb	350 U ppb	810,000 ppb	1.11 × SQL
	Pyrene	580 ppb	350 U ppb	480,000 ppb	1.66 × SQL
	INORGANICS				
	Beryllium	0.63 J ppm	0.35 UJ ppm	0.1 ppm	1.8 × SDL
	Calcium	2,240 ppm	460 ppm	NL	4.87 × Ref
	Cobalt	17.8 ppm	4.1 ppm	NL	4.34 × Ref
SO-08	PESTICIDES/PCBs				
	Methoxychlor	29 J ppb	18 U ppb	38,000 ppb	1.61 × SQL
SO-09	INORGANICS				
	Cyanide	4.1 ppm	0.06 UJ ppm	100 ppm	68.3 × SDL

Notes: Bolded concentrations exceed the applicable New Hampshire Department of Environmental Services soil standard for category S-1 soil.

Soil/source sample SO-07 was collected from a depth of 5 to 7 feet below the ground surface from an area covered with a layer of asphalt pavement. As a result, it may be more appropriate to compare soil/source sample SO-07 to the New Hampshire Department of Environmental Services soil standard for category S-3 soil. The New Hampshire Department of Environmental Services soil standard for beryllium for category S-3 soil is 1 ppm.

- J = Quantitation is approximate due to limitations identified during the quality control review.
 U = Indicates that substance was analyzed for, but not detected. The associated numerical value is the SQL (for organic analysis) or SDL (for inorganic analysis).
 UJ = Indicates that substance was analyzed for, but not detected. The associated numerical value is the estimated SQL (for organic analysis) or SDL (for inorganic analysis).
 NH S-1 = New Hampshire Department of Environmental Services Soil Standards for Category S-1 Soil included for comparison purposes only.
 ppb = Parts per billion.
 ppm = Parts per million.
 NL = Not listed.
 Ref = Reference value.
 SVOCs = Semivolatile Organic Compounds.
 PCBs = Polychlorinated biphenyls.
 SQL = Sample Quantitation Limit.
 SDL = Sample Detection Limit.

[30-33; 42]

Several substances that were detected in the soil/source samples were qualified during data validation. Non-detected results for thallium were rejected since the matrix spike recovery was less than 30%. Results may be biased low due to severe matrix interference or laboratory error, and false negatives are possible. The positive result for endrin ketone in sample SO-08 was rejected due to failed target compound identification criteria [31].

No VOCs were detected above reference criteria in START soil/source samples [32].

Seven SVOCs were detected above reference criteria in START soil/source samples. The following SVOCs were detected (with the maximum concentrations in parentheses): benzo(a)anthracene (360 ppb in SO-06); benzo(a)pyrene (420 ppb in SO-06); benzo(b)fluoranthene (510 ppb in SO-06); benzo(k)fluoranthene (500 J ppb in SO-07); chrysene (420 ppb in SO-06); fluoranthene (680 ppb in SO-06); and pyrene (620 ppb in SO-06) [31].

Three pesticides were detected above reference criteria in START soil/source samples. The following three pesticides were detected (with the maximum concentrations in parentheses): 4,4'-DDE (28 ppb in SO-03); 4,4'-DDT (47 J ppb in SO-03); and methoxychlor (29 J ppb in SO-08) [31].

No PCBs were detected in START soil/source samples [31].

Four metals and cyanide were detected above reference criteria in START soil/source samples. The following five inorganic substances were detected (with the maximum concentrations in parentheses): beryllium (0.63 J ppm in SO-07); calcium (17,200 ppm in SO-03); cobalt (17.8 ppm in SO-07); cyanide (4.1 ppm in SO-09); and lead (21.7 ppm in SO-02) [30].

The analytical results of soil/source samples were compared to NH DES soil standards for soil category S-1. Only one metal (beryllium) was detected at a concentration (0.63 J ppm in SO-07) exceeding the NH DES soil standard for beryllium in soil category S-1 (0.1 ppm) [30; 42]. Soil/source sample SO-07 was collected from a depth of 5 to 7 feet below the ground surface from an area covered with a layer of asphalt pavement. As a result, it may be more appropriate to compare soil/source sample SO-07 to the NH DES soil standard for category S-3 soil. The NH DES soil standard for beryllium for category S-3 soil is 1 ppm [42].

START collected soil/source samples as part of the E J Abbott PA/SI. Seven SVOCs, three pesticides, and five inorganic substances were detected above reference criteria in START soil/source samples, thereby documenting the presence of hazardous substances on the E J Abbott property.

GROUNDWATER PATHWAY

The generalized subsurface profile at the E J Abbott property consists of an approximately 10-ft-thick layer of variable fill materials overlying an approximately 10-ft-thick layer of natural granular soils. Fill materials consist generally of brown-to-dark-brown, fine-to-coarse sand with varying amounts of gravel, silt, and building rubble [1, p. 5].

Bedrock beneath the property is weakly foliated spaulding tonalite, formed during the early Devonian Period, and consists of spotted biotite, quartz diorite, tonalite, and granite. The depth to bedrock below the property is approximately 20 ft. No bedrock formation mapped within 4 radial miles of the property exhibits karst characteristics [14].

Groundwater at the E J Abbott property is classified by NH DES as GB/GA. This classification denotes groundwater which may not be suitable for direct human consumption without treatment due to waste discharges, spills, leaks of chemicals, and/or land use impacts [25]. On 6 February 2002, START personnel conducted a groundwater elevation survey. Groundwater on the property was measured at depths ranging from 8 to 15 ft bgs in on-site monitoring wells [38, p. 16]. Based on a groundwater elevation survey conducted by START, groundwater in the overburden aquifer flows southeast toward Stony Brook.

The average annual precipitation for Wilton, New Hampshire is 46.9 inches [16].

All or part of the following New Hampshire cities and towns are located within 4 radial miles of the property: Wilton (population 3,327); Milford (population 12,974); Amherst (population 10,537); Greenville (population 2,209); Lyndeborough (population 1,522); Temple (population 1,278); Mason (population 1,569); and Mount Vernon (population 1,982) [20; 35-37]. No wellhead protection areas exist within 4 radial miles of the property [4].

The nearest public groundwater drinking water supply well is an overburden well (Abbott Well) operated by the Town of Wilton and located approximately 2.1 miles southwest of the property. The Abbott Well serves an estimated 1,800 people, and is not part of a blended water system. The Town of Wilton operates one other overburden well (Everett Well), located approximately 2.2 miles southwest of the property. The Everett Well is not part of a blended water system, and also serves an estimated 1,800 people [4; 6].

Milford, Amherst, Greenville, Lyndeborough, Temple, Mason, and Mount Vernon do not obtain their public drinking water supplies from drinking water supply wells located within 4 radial miles of the E J Abbott property [4; 5; 6]. Table 5 summarizes public groundwater supply sources located within 4 radial miles of the E J Abbott property.

Table 5
Public Groundwater Supply Sources Within 4 Radial Miles of
E J Abbott Memorial Trust

Distance/ Direction from Site	Source Name	Location of Source ^a	Estimated Population Served	Source Type ^b
2.1 miles/southwest	Abbott Well	Wilton	1,800	Overburden
2.2 miles/southwest	Everett Well	Wilton	1,800	Overburden

^a Indicates Town in which well is located.

^b Overburden, Bedrock, or Unknown.

[4; 5; 6]

According to Town of Wilton personnel, all properties in the vicinity of the property are served by municipal drinking water [13, p. 16]. According to 1990 U.S. CENTRACTS data, the nearest private drinking water supply well is located within 0.25 miles of the property; however, its exact location is unknown. Populations served by private groundwater supplies within 4 radial miles of the property were estimated using equal distribution calculations of U.S. Census CENTRACTS data identifying population, households, and private drinking water wells for “Block Groups” that lie within or partially within individual radial distance rings of the property. The estimated number of residents utilizing private groundwater sources within 4 radial miles of the property is 3,152 [2] Table 6 summarizes the estimated drinking water populations served by groundwater sources within 4 radial miles of the property.

Table 6

**Estimated Drinking Water Populations Served by Groundwater Sources
Within 4 Radial Miles of E J Abbott Memorial Trust**

Radial Distance from E J Abbott Memorial Trust (miles)	Estimated Population Served by Private Wells	Estimated Population Served by Public Wells	Total Estimated Population Served by Groundwater Sources Within the Ring
≥ 0.00 to 0.25	9	0	9
> 0.25 to 0.50	29	0	29
> 0.50 to 1.00	127	0	127
> 1.00 to 2.00	573	0	573
> 2.00 to 3.00	989	3,600	4,589
> 3.00 to 4.00	1,425	0	1,425
TOTAL	3,152	3,600	6,752

[2; 4; 5; 6]

On 11 and 12 August 1986, GZA installed two overburden groundwater monitoring wells (GZ-1 and GZ-2) and one “test probe observation well” (GZ-3) on the property. On 24 August 1986, GZA collected groundwater samples (also referred to as GZ-1 and GZ-2) from monitoring wells GZ-1 and GZ-2. EAI analyzed the groundwater samples for “priority pollutant” VOCs, ammonia, cyanide, and cyanate using unspecified methods [1, pp. 5, 7].

Analytical results of the groundwater sample collected from monitoring well GZ-1 indicated the presence of ammonia (1,100 ppb) and cyanate (250 ppb). Analytical results of the groundwater sample collected from monitoring well GZ-2 indicated the presence of ammonia (660 ppb), cyanide (660 ppb), and cyanate (740 ppb). The concentration of cyanide in groundwater samples GZ-2 exceeds the NH DES Ambient Groundwater Quality Standard (AGQS) for cyanide [42]. No VOCs were detected in either groundwater sample. GZA concluded that cyanide concentrations detected in the groundwater samples did not present a significant public health threat. This conclusion was based on the assumption that there were no public groundwater drinking water

supply wells or private groundwater drinking water supply wells located within 1 radial mile of the property in a hydraulically downgradient direction [1, pp. 9-10].

On 14, 15, and 17 January 2002, as part of the PA/SI, TDS, on behalf of START, installed six overburden groundwater monitoring wells (referred to as MW-01 through MW-05 and MW-07) to determine the presence of any hazardous substances in overburden groundwater. Monitoring wells MW-01 through MW-05 were installed on Lot No. 104-2; and monitoring well MW-07 was installed on Lot No. 105 (Wilton Associates) south of the property, across Burns Hill Road [13, pp. 26-46].

On 5 and 6 February 2002, START personnel collected seven groundwater samples (GW-01 through GW-05, GW-07, and GW-08), including a duplicate, from monitoring wells MW-01 through MW-05 and MW-07. Groundwater sample GW-01 was collected from MW-01 to establish reference concentrations for local overburden groundwater. The groundwater samples were analyzed through an EPA CLP laboratory for VOCs, SVOCs, pesticides, PCBs, TAL metals, and cyanide, with the exception of GW-04, which was analyzed for cyanide only [28; 29].

Table 7

Sample Summary
Groundwater Samples Collected by START on 5 and 6 February 2002

Sample Location No.	Traffic Report Nos.	Date/ Time (hrs)	Remarks	Sample Source
MATRIX: Groundwater				
GW-01	A0CN3 MA0BP6	2/5/02 1430	Grab	Groundwater sample collected from MW-01. pH = 6.35, Temperature = 6.35°C, Conductivity = 716.0 µS/cm. FID = 0 units above background; PID = 0 units above background. 42° 50' 41.04" north latitude 71° 44' 23.89" west longitude
GW-02	A0CN4 MA0BP7	2/6/02 1100	Grab	Groundwater sample collected from MW-02. pH = 7.00, Temperature = 8.28°C, Conductivity = Not Recorded* FID = 0 units above background; PID = 0 units above background. 42° 50' 41.60" north latitude 71° 44' 22.68" west longitude
GW-03 (MS/MSD)	A0CN5 MA0BP8	2/5/02 1300	Grab	Groundwater sample collected from MW-03. pH = 7.37, Temperature = 6.87°C, Conductivity = Not Recorded* FID = 0 units above background; PID = 0 units above background. 42° 50' 42.44" north latitude 71° 44' 23.69" west longitude

Table 7

Sample Summary
Groundwater Samples Collected by START on 5 and 6 February 2002 (Concluded)

Sample Location No.	Traffic Report Nos.	Date/ Time (hrs)	Remarks	Sample Source
MATRIX: Groundwater (Concluded)				
GW-04	A0CN6 MA0BP9	2/6/02 1035	Grab	Groundwater sample collected from MW-04. This sample was submitted for cyanide analysis only. Water quality parameters were not recorded due to the limited volume of groundwater that could be collected. FID = 0 units above background; PID = 0 units above background. 42° 50' 40.86" north latitude 71° 44' 20.73" west longitude
GW-07	A0CN8 MA0BQ1	2/5/02 1345	Grab	Groundwater sample collected from MW-07. pH = 7.03, Temperature = 10.42°C, Conductivity = 1,197 µS/cm. FID = 0 units above background; PID = 0 units above background. 42° 50' 40.03" north latitude 71° 44' 21.03" west longitude
GW-08	A0CN9 MA0BQ2	2/5/02 1345	Grab	Field duplicate of GW-07, collected for quality control.

MS/MSD = Matrix Spike/Matrix Spike Duplicate.

FID = Flame Ionization Detector.

PID = Photoionization Detector.

°C = Degrees Celsius.

µS/cm = Micro Siemens per centimeter.

hrs = Hours. Denotes military time.

* = Due to problems encountered calibrating water quality monitors, specific conductance could not be recorded.

[13, pp. 5-21]

Table 8 is a summary of organic compounds and inorganic elements detected through CLP analyses of START groundwater samples. For each sample location, a compound or element is listed if it is detected at three times or greater than the reference sample concentration (GW-01). However, if the compound or element was not detected in the reference sample, the reference sample's SQL or SDL is used as the reference value. These compounds or elements are listed if they occurred at a value equal to or greater than the reference sample's SQL or SDL and are designated by their approximate relative concentration above these values.

Complete analytical results of START groundwater samples, including quantitation and detection limits, are presented in Attachment B. Sample results qualified with a "J" on analytical tables are considered approximate because of limitations identified during CLP data validation.

Table 8

**Summary of Analytical Results of
Groundwater Sample Analysis for E J Abbott Memorial Trust**

Sample Location	Compound/ Element	Sample Concentration	Reference Concentration	NH AGQS	Comments
GW-02	INORGANICS				
	Calcium	122,000 ppb	25,300 ppb	NL	4.8 × Ref
	Cyanide	75.2 ppb	6.5 U ppb	200 ppb	11.6 × SDL
	Lead	5.7 J ppb	2.9 U ppb	15 ppb	1.97 × SDL
	Manganese	2,490 ppb	552 ppb	NL	4.5 × Ref
GW-05	INORGANICS				
	Iron	8,150 J ppb	1,690 J ppb	NL	4.8 × Ref
GW-07	VOCs				
	Methyl tert-Butyl Ether	140 ppb	10 U ppb	13 ppb	14 × SQL
	INORGANICS				
	Beryllium	0.12 J ppb	0.10 U ppb	4 ppb	1.2 × SDL
GW-08	VOCs				
	Methyl tert-Butyl Ether	140 ppb	10 U ppb	13 ppb	14 × SQL
	INORGANICS				
	Aluminum	2,650 J ppb	764 J ppb	NL	3.5 × Ref
	Beryllium	0.22 ppb	0.10 U ppb	4 ppb	2.2 × SDL
	Copper	2.1 J ppb	1.5 U ppb	1,300 ppb	1.4 × SDL
	Vanadium	5.5 ppb	1.7 ppb	NL	3.2 × Ref

Notes: Bolded concentrations exceed the applicable New Hampshire Department of Environmental Services Ambient Groundwater Quality Standards (AGQS).

NH AGQS = New Hampshire Ambient Groundwater Quality Standards, included for comparison only.
J = Quantitation is approximate due to limitations identified during the quality control review.
U = Indicates that substance was analyzed for but not detected. The associated numerical value is the SQL or SDL.
Ref = Reference value. ppb = Parts per billion.
SQL = Sample Quantitation Limit. NL = Not Listed.
VOCs = Volatile Organic Compounds. SDL = Sample Detection Limit.

[28; 29; 42; 56]

One VOC was detected above reference criteria in the groundwater samples. Methyl tert-butyl ether (MTBE) was detected in samples GW-07 and GW-08 at a concentration of 140 ppb [29]. This concentration exceeds NH DES AGQS for MTBE (13 ppb) [42; 56]. Groundwater samples GW-07 and GW-08 were collected from monitoring well MW-07 located on the Wilton Associates property. MTBE was not detected in samples collected from monitoring wells located on the E J Abbott property. Available file information does not indicate that MTBE was used or disposed of on the E J Abbott property, and MTBE was not detected in soil/source samples collected by START. In addition, MTBE is almost exclusively used as a fuel additive in gasoline [47]. According to Wilton Associates, there is an abandoned underground storage tank (UST) located on their property (*i.e.*, Lot No. 105) [53]. This UST is a potential source of MTBE. Therefore, the presence of MTBE in START groundwater samples will not be considered attributable to sources located on the E J Abbott property.

No SVOCs, pesticides, or PCBs were detected in the groundwater samples [29].

Eight metals and cyanide were detected above reference criteria in the groundwater samples. The following inorganic substances (maximum concentrations in parentheses) were detected in groundwater samples: aluminum (2,650 J ppb in GW-08); beryllium (0.22 ppb in GW-08); calcium (122,000 ppb in GW-02); copper (2.1 J ppb in GW-08); cyanide (75.2 ppb in GW-02); iron (8,150 J ppb in GW-05); lead (5.7 J ppb in GW-02); manganese (2,490 ppb in GW-02); and vanadium (5.5 ppb in GW-08) [28]. Analytical results qualified by the designation “J” are considered approximate due to limitations identified during the quality control review. None of the NH DES AGQS for inorganic substances were exceeded [42]. Based on available file information, the presence of cyanide is attributable to the historical disposal of sodium cyanide on the property [3]. Beryllium, calcium, cyanide, and lead were detected above reference criteria in soil/source samples collected from the E J Abbott property by START [30]. As a result, the presence of beryllium, calcium, cyanide, and lead at concentrations above reference criteria in START groundwater samples is considered at least partially attributable to the E J Abbott property.

START conducted groundwater sampling as part of the E J Abbott PA/SI. Based on the analytical results, a release to groundwater of three metals and cyanide has been documented. However, the metals and cyanide were not detected at concentrations above their respective NH DES AGQS. No impacts to nearby groundwater drinking water sources are known or suspected. To date, no actions have been taken to address the release to groundwater.

SURFACE WATER PATHWAY

The E J Abbott property is located in the Merrimack River drainage basin [25]. Topography throughout the property is relatively flat but slopes to the east toward Stony Brook [1, p. 2]. The property is located in Zone A6 - areas of the 100-year floodplain [27]. Stormwater runoff on the property either accumulates in depressions on the ground surface, flows into the two catchbasins located near the center of the property, or flows east into Stony Brook. The most upstream probable point of entry (PPE) of contaminants from on-site sources to the surface water pathway is located at the northern extent of the property, along Stony Brook [49].

From the PPE, Stony Brook continues southeast for approximately 0.06 miles, until it feeds into the Souhegan River. The Souhegan River flows through the New Hampshire towns of Milford, Amherst, and Merrimack. The Souhegan River is fed by Purgatory Brook, Tucker Brook, Great

Brook, Beaver Brook, and Honey Pot Pond. The terminus of the 15-mile downstream surface water pathway is located in Merrimack, NH, approximately 2 miles west of Route 293 (Figure 4) [7; 35 - 37].

There are no mean annual flow rate data available for United States Geological Survey (USGS) gaging stations located on Stony Brook [50]. The drainage basin area of Stony Brook at the PPE is approximately 18.2 square miles (mi²). Using the USGS estimating factor of 1.8 cubic feet per second (cfs)/mi² (an estimate of the average intensity, rate, and frequency of overland flow in New England), Stony Brook has an estimated flow rate of 33 cfs at the PPE [48]. USGS gaging station Nos. 01093852 and 01093875 are located along the Souhegan River approximately 1.8 miles and 3.6 miles downstream of the PPE, respectively. The mean annual flow rate of the Souhegan River at USGS gaging station No. 01093852 is 170 cfs, and the flow rate of the Souhegan River at USGS gaging station No. 01093875 is 194 cfs. By extrapolating from the flow rates at these gaging stations, the flow rates for the Souhegan River at its confluence with Stony Brook and at the 15-mile downstream surface water pathway terminus were estimated to be 146 cfs and 347 cfs, respectively [21; 22; 23]. Table 9 summarizes surface water bodies located along the 15-mile downstream surface water pathway.

Table 9

**Surface Water Bodies Along the 15-Mile Downstream Pathway
from E J Abbott Memorial Trust**

Surface Water Body	Descriptor ^a	Length of Reach (miles)	Flow Characteristics (cfs) ^b	Length of Wetland Frontage (miles)
Stony Brook	Small to moderate stream	0.06	33	0
Souhegan River	Moderate to large stream	14.94	146 to 347	2.0

^a Small to moderate stream 10-100 cfs. Moderate to large stream >100-1,000 cfs.

^b Cubic feet per second.

[7; 21-23; 35-37; 43-46]

There are no surface water drinking water intakes located along the 15-mile downstream surface water pathway [5]. Stony Brook and Souhegan River are stocked by the New Hampshire Fish and Game Department with Rainbow Trout and Eastern Brook Trout [41]. START presumes that Stony Brook is a fishery, as fishing tackle was observed by START personnel along the banks of Stony Brook [13, p. 11]. Approximately 2.0 miles of wetland frontage are located along the 15-mile downstream surface water pathway [7]. Habitats for one State-endangered species, *Cassia hebecarpa* (Wild Senna), and one State-threatened species, *Heterodon platirhinos* (Eastern Hognose Snake), are located along the 15-mile downstream surface water pathway [12].

Table 10 details the sensitive environments located along the 15-mile downstream surface water pathway.

Table 10
Sensitive Environments Along the 15-Mile Downstream Surface Water Pathway
from E J Abbott Memorial Trust

Sensitive Environment Name	Sensitive Environment Type	Surface Water Body	Downstream Distance from PPE (miles)	Flow Rate at Environment (cfs) ^a
Stony Brook	CWA-protected water body	Stony Brook	0 to 0.06	33
Souhegan River Wetlands	Wetland (2.0 miles)	Souhegan River	0.06 to 15	146 to 347
One State-endangered Species (<i>Cassia hebecarpa</i>)	State-endangered species habitat	Souhegan River	6.7	194 to 347
One State-threatened Species (<i>Heterodon platirhinos</i>)	State-threatened species habitat	Souhegan River	8.5	194 to 347

^a Cubic feet per second

PPE = Probable Point of Entry

CWA = Clean Water Act

[7; 12; 21; 22; 23; 43-46]

On 24 August 1986, GZA collected two surface water samples (SW-1 and SW-2) from Stony Brook. SW-1 was collected approximately 5 ft upstream of the cyanide vault; and SW-2 was collected approximately 50 ft downstream of the cyanide vault, directly south of the Burns Hill Road bridge. The samples were submitted to EAI and analyzed for “priority pollutant” VOCs, cyanide, cyanate, and ammonia using unknown methods. Analytical results of surface water sample SW-1 indicated the presence of cyanate (100 ppb) and ammonia (60 ppb). Analytical results of surface water sample SW-2 indicated the presence of cyanate (100 ppb) and ammonia (70 ppb) [1].

On 5 and 6 February 2002, START personnel collected 10 sediment samples from locations along Souhegan River and Stony Brook to determine if the two water bodies have been impacted by a release from potential sources on the E J Abbott property (Figure 2). START collected two reference samples (SD-07 and SD-08) from locations upstream of the PPE along Stony Brook, and two reference samples (SD-04 and SD-05) from locations along Souhegan River, upstream of its confluence with Stony Brook. Sediment samples SD-06 and SD-09 were collected from Stony Brook along the E J Abbott property. Sediment samples SD-01 through SD-03 were collected from locations downstream from the E J Abbott property along Souhegan River, and SD-10 was collected at the outlet of a former raceway suspected by START to run beneath the cyanide vault. The sediment samples were analyzed through a DAS laboratory for VOCs, SVOCs, pesticides, PCBs, TAL metals, and cyanide, with the exception of SD-04 and SD-08, which were analyzed for TAL metals only [32-34]. Sample locations are illustrated on Figure 3.

Table 11 summarizes the sediment samples collected by START on 5 and 6 February 2002.

Table 11
Sample Summary
Sediment Samples Collected by START on 5 and 6 February 2002

Sample Location No.	Traffic Report No.	Date/Time (hrs)	Remarks	Sample Depth (feet)	Sample Source
MATRIX: Sediment					
SD-01	D05532	2/5/02 0950	Grab	0 to 2	Sediment sample collected from Souhegan River, downstream from the EJA property. Material is gray, light brown, fine-to-medium SAND with trace organics and gravel. FID = 0 units above background; PID = 0 units above background. pH = 9.37; Temp. = 0.1° C; Cond. = 104.5 µS. 42° 50' 38.18" north latitude 71° 44' 19.52" west longitude
SD-02	D05533	2/5/02 1010	Grab	0 to 2	Field duplicate of SD-01, collected for quality control.
SD-03 (MS/MSD)	D05534	2/5/02 1140	Grab	0 to 2	Sediment sample collected from Souhegan River, downstream from the EJA property. Material is gray, light brown, medium SAND with trace silt and fine sand. FID = 0 units above background; PID = 0 units above background. pH = 7.76; Temp. = 0.2° C; Cond. = 12.2 µS. 42° 50' 38.97" north latitude 71° 44' 19.55" west longitude
SD-04	D05535	2/5/02 1025	Grab	0 to 2	Sediment sample collected from Souhegan River, upstream of its confluence with Stony Brook, to serve as a reference sample for metals only analysis. Material is gray, light brown, coarse SAND with trace fine sand and medium gravel. FID = 0 units above background; PID = 0 units above background. pH = 9.02; Temp. = 0.0° C; Cond. = 10.4 µS. 42° 50' 38.69" north latitude 71° 44' 20.76" west longitude

Table 11

Sample Summary
Sediment Samples Collected by START on 5 and 6 February 2002 (Continued)

Sample Location No.	Traffic Report No.	Date/Time (hrs)	Remarks	Sample Depth (feet)	Sample Source
MATRIX: Sediment (Continued)					
SD-05	D05536	2/5/02 1035	Grab	0 to 2	Sediment sample collected from Souhegan River upstream of its confluence with Stony Brook, to serve as a reference sample. Material is gray, light brown, coarse SAND with trace fine sand and medium gravel. FID = 0 units above background; PID = 0 units above background. pH = 8.82; Temp. = 0.0° C; Cond. = 10.2 µS. 42° 50' 38.79" north latitude 71° 44' 20.62" west longitude
SD-06	D05537	2/6/02 1105	Grab	0 to 2	Sediment sample collected from Stony Brook upstream of its confluence with the Souhegan River, along the EJA property. Material is dark brown, fine-to-medium SAND with trace organics. FID = not recorded ¹ ; PID = 0 units above background. pH = 9.1; Temp. = 0.3° C; Cond. = 44.7 µS. 42° 50' 41.03" north latitude 71° 44' 20.50" west longitude
SD-07	D05538	2/5/02 1520	Grab	0 to 2	Sediment sample collected from Stony Brook, upstream from the EJA property, to serve as a reference sample. Material is gray-to-brown, medium SAND with little fine sand and silt. FID = 0 units above background; PID = 0 units above background. pH = 8.47; Temp. = 0.0° C; Cond. = 14.7 µS. 42° 50' 42.84" north latitude 71° 44' 26.38" west longitude
SD-08	D05539	2/5/02 1510	Grab	0 to 2	Sediment sample collected from Stony Brook, upstream from the EJA property, to serve as a reference sample for metals only analysis. Material is brown, fine SAND and SILT. FID = 0 units above background; PID = 0 units above background. pH = 8.23; Temp. = 0.0° C; Cond. = 14.7 µS. 42° 50' 42.83" north latitude 71° 44' 26.57" west longitude

Table 11

Sample Summary
Sediment Samples Collected by START on 5 and 6 February 2002 (Concluded)

Sample Location No.	Traffic Report No.	Date/ Time (hrs)	Remarks	Sample Depth (feet)	Sample Source
MATRIX: Sediment (Concluded)					
SD-09	D05540	2/5/02 1415	Grab	0 to 2	Sediment sample collected from Stony Brook, along the EJA property. Material is dark brown, SILT with some fine sand. FID = 0 units above background; PID = 0 units above background. pH = 8.37; Temp. = 0.4° C; Cond. = 11.3 µS. 42° 50' 42.60" north latitude 71° 44' 22.48" west longitude
SD-10	D05545	2/6/02 1305	Grab	0 to 2	Sediment sample collected from Souhegan River at the outlet of the former raceway leading from the EJA property. Material is gray, SILT and medium SAND, with some fine gravel. FID = not recorded ² ; PID = 0 units above background. pH, Temp., and Cond. = not recorded ² . Global Positioning System coordinates were not recorded ²

FID = Flame Ionization Detector.

PID = Photoionization Detector.

Temp. = Temperature.

Cond. = Conductivity.

°C = Degrees Celsius.

hrs = Hours. Denotes military time.

µS = Micro Siemens.

PPE = Probable Point of Entry.

MS/MSD = Matrix Spike/Matrix Spike Duplicate.

EJA = E J Abbott Property.

¹ = Due to temperature-related equipment malfunction, FID readings could not be recorded.

² = Due to difficulties accessing sampling locations, the Global Positioning System unit and some monitoring instruments could not be used.

[38, p. 19]

Table 12 is a summary of organic compounds and inorganic elements detected through DAS analyses of START sediment samples. For each sample location, a compound or element is listed if it is detected at three times or greater than the reference sample concentration. Samples SD-07 and SD-08 are the reference samples for SD-06, SD-09, and SD-10. Samples SD-04, SD-05, SD-07, and SD-08 are the reference samples for SD-01, SD-02, and SD-03. However, if the compound or element was not detected in the appropriate reference sample, the reference sample's SQL or SDL is used as the reference value. These compounds or elements are listed if they occurred at a value equal to or greater than the reference sample's SQL or SDL and are designated by their approximate

relative concentration above these values.

Complete analytical results of START sediment samples, including quantitation and detection limits, are presented in Attachment C. Sample results qualified with a “J” on analytical tables are considered approximate because of limitations identified during DAS data validation. In addition, organic sample results reported at concentrations below quantitation limits and confirmed by mass spectrometry are also qualified by a “J” and considered approximate.

Table 12
Summary of Analytical Results of
Sediment Sample Analysis for E J Abbott Memorial Trust

Sample Location	Compound/Element	Sample Concentration	Reference Concentration	NOAA PEL ¹	Comments
SD-01	INORGANICS				
	Copper	10.8 ppm	0.66 U ppm	197,000 ppb	16.4 × SDL
SD-02	PESTICIDES				
	DDT, 4,4'-	20 J ppb	0.80 J ppb	4,450 ppb	25 × Ref
	INORGANICS				
	Copper	6 ppm	0.66 U ppm	197,000 ppb	9.1 × SDL
SD-03	SVOCs				
	Acenaphthylene	1,400 ppb	83 J ppb	NL	16.9 × Ref
	Acenaphthene	900 ppb	390 U ppb	NL	2.3 × SQL
	Anthracene	5,200 J ppb	67 J ppb	NL	77.6 × Ref
	Benzo(a)anthracene	11,000 ppb	330 J ppb	385 ppb	33.3 × Ref
	Benzo(a)pyrene	9,300 ppb	330 J ppb	782 ppb	28.2 × Ref
	Benzo(b)fluoranthene	10,000 ppb	340 J ppb	NL	29.4 × Ref
	Benzo(g,h,i)perylene	5,000 ppb	210 J ppb	NL	23.8 × Ref
	Benzo(k)fluoranthene	6,000 ppb	230 J ppb	NL	26 × Ref
	Bis(2-Ethylhexyl)phthalate	1,400 J, EB ppb	390 U ppb	NL	3.6 × SQL
	Carbazole	730 J ppb	31 J ppb	NL	23.5 × Ref

Table 12

Summary of Analytical Results
Sediment Sample Analysis for E J Abbott Memorial Trust (Continued)

Sample Location	Compound/ Element	Sample Concentration	Reference Concentration	NOAA PEL ¹	Comments
SD-03 (Concl.)	SVOCs (Concluded)				
	Chrysene	11,000 ppb	410 ppb	862 ppb	26.8 × Ref
	Dibenzo(a,h)anthracene	2,400 ppb	76 J ppb	NL	31.6 × Ref
	Dibenzofuran	810 ppb	390 U ppb	NL	2.1 × SQL
	Fluoranthene	24,000 J ppb	780 ppb	2,355 ppb	31 × Ref
	Fluorene	1,900 J ppb	32 J ppb	NL	59 × Ref
	Indeno(1,2,3-cd)pyrene	4,800 ppb	180 J ppb	NL	27 × Ref
	Phenanthrene	17,000 J ppb	440 ppb	515 ppb	39 × Ref
	Pyrene	23,000 ppb	650 ppb	875 ppb	35.4 × Ref
	INORGANICS				
	Copper	8.8 ppm	0.66 U ppm	197,000 ppb	13 × SDL
SD-06	VOCs				
	Acetone	65 J ppb	10 UJ ppb		6.5 × Ref
	SVOCs				
	Acenaphthylene	520 J ppb	83 J ppb	NL	6.3 × Ref
	Anthracene	470 J ppb	67 J ppb	NL	7.01 × Ref
	Benzo(a)anthracene	1,900 ppb	290 J ppb	385 ppb	6.6 × Ref
	Benzo(a)pyrene	1,900 ppb	320 J ppb	782 ppb	5.9 × Ref
	Benzo(b)fluoranthene	2,100 ppb	340 J ppb	NL	6.2 × Ref
	Benzo(g,h,i)perylene	1,200 ppb	210 J ppb	NL	5.7 × Ref
	Benzo(k)fluoranthene	1,300 ppb	220 J ppb	NL	5.9 × Ref
	Carbazole	180 J ppb	31 J ppb	NL	5.8 × Ref
	Chrysene	2,300 ppb	360 J ppb	862 ppb	6.4 × Ref
	Dibenzo(a,h)anthracene	490 J ppb	76 J ppb	NL	6.4 × Ref
	Fluoranthene	3,600 ppb	720 ppb	2,355 ppb	5.0 × Ref
	Fluorene	240 J ppb	32 J ppb	NL	7.5 × Ref

Table 12

Summary of Analytical Results
Sediment Sample Analysis for E J Abbott Memorial Trust (Continued)

Sample Location	Compound/ Element	Sample Concentration	Reference Concentration	NOAA PEL ¹	Comments
SD-06 (Concl.)	SVOCs (Concluded)				
	Indeno(1,2,3-cd)pyrene	1,100 ppb	180 J ppb	NL	6.1 × Ref
	Phenanthrene	2,500 ppb	420 ppb	515 ppb	5.9 × Ref
	Pyrene	3,800 ppb	600 ppb	875 ppb	6.3 × Ref
	PESTICIDES				
	DDD, 4,4'-	2.8 J ppb	0.76 J ppb	8.51 ppb	3.7 × Ref
	DDT, 4,4'-	3.1 J ppb	0.80 J ppb	4,450 ppb	3.9 × Ref
SD-09	SVOCs				
	Acenaphthylene	410 J ppb	83 J ppb	NL	4.9 × Ref
	Anthracene	330 J ppb	67 J ppb	NL	4.9 × Ref
	Benzo(a)anthracene	1,400 ppb	290 J ppb	385 ppb	4.8 × Ref
	Benzo(a)pyrene	1,400 ppb	320 J ppb	782 ppb	4.4 × Ref
	Benzo(b)fluoranthene	1,400 ppb	340 J ppb	NL	4.1 × Ref
	Benzo(g,h,i)perylene	890 ppb	210 J ppb	NL	4.2 × Ref
	Benzo(k)fluoranthene	1,000 ppb	220 J ppb	NL	4.5 × Ref
	Carbazole	140 J ppb	31 J ppb	NL	4.5 × Ref
	Chrysene	1,700 ppb	360 J ppb	862 ppb	4.7 × Ref
	Dibenzo(a,h)anthracene	350 J ppb	76 J ppb	NL	4.6 × Ref
	Fluoranthene	3,600 ppb	720 ppb	2,355 ppb	5.0 × Ref
	Fluorene	170 J ppb	32 J ppb	NL	5.3 × Ref
	Indeno(1,2,3-cd)pyrene	800 J ppb	180 J ppb	NL	4.4 × Ref
	Phenanthrene	1,900 ppb	420 ppb	515 ppb	4.5 × Ref
	Pyrene	2,900 ppb	600 ppb	875 ppb	4.8 × Ref
	PESTICIDES				
	DDD, 4,4'-	11 ppb	0.76 J ppb	8.51 ppb	14.5 × Ref
	DDT, 4,4'-	12 ppb	0.80 J ppb	4,450 ppb	15 × Ref

Table 12

**Summary of Analytical Results of
Sediment Sample Analysis for E J Abbott Memorial Trust (Concluded)**

Sample Location	Compound/ Element	Sample Concentration	Reference Concentration	NOAA PEL ¹	Comments
SD-09 (Concl.)	INORGANICS				
	Arsenic	31.3 J ppm	9.8 J ppm	17,000 ppb	3.2 × Ref
SD-10	SVOCs				
	Acenaphthylene	270 J ppb	83 J ppb	NL	3.25 × Ref
	Anthracene	220 J ppb	67 J ppb	NL	3.28 × Ref
	Benzo(k)fluoranthene	660 ppb	220 J ppb	NL	3 × Ref
	Carbazole	99 J ppb	31 J ppb	NL	3.19 × Ref
	Fluoranthene	2,200 ppb	720 ppb	2,355 ppb	3.1 × Ref
	Fluorene	100 J ppb	32 J ppb	NL	3.13 × Ref

Notes: Bolded concentrations exceed the applicable National Oceanic and Atmospheric Administration (NOAA) Probable Effects Level (PEL) for the associated compound or element.

¹ National Oceanic and Atmospheric Administration (NOAA) Probable Effects Level (PEL) for the associated compound or element. PELs identify elements which are probably elevated to toxic levels. At a level above the PEL, adverse effects to benthic organisms are frequently expected.

Ref = Reference value.

EB = The compound was identified in an aqueous equipment blank that was used to assess field contamination associated with sediment samples.

J = Quantitation is approximate due to limitations identified during the quality control review.

U = Indicates that substance was analyzed for, but not detected. The associated numerical value is the SQL (for organic analyses) or SDL (for inorganic analyses).

UJ = Indicates that substance was analyzed for, but not detected. The associated numerical value is the estimated SQL (for organic analysis) or SDL (for inorganic analysis).

NL = Not Listed.

SQL = Sample Quantitation Limit.

SDL = Sample Detection Limit.

SVOCs = Semivolatile Organic Compounds.

VOCs = Volatile Organic Compounds.

ppb = Parts per billion.

ppm = Parts per million.

[33; 34; 54]

Several substances that were detected in the sediment samples were qualified during data validation. Non-detected results for selenium were rejected since the matrix spike recovery was less than 30%. Results may be biased low due to severe matrix interference or laboratory error, and false negatives are possible. The non-detected endrin result for sample SD-03 was rejected due to poor recovery in the matrix spike and matrix spike duplicate samples. Positive results for endosulfan I, endosulfan sulfate, and 4,4'-DDT in sample SD-03 and for 4,4'-DDE in sample SD-09 were rejected due to failed target compound identification criteria [33; 34].

Acetone (65 J ppb in SD-06) was the only VOC detected above reference criteria in the sediment samples collected from the Souhegan River and Stony Brook [34]. Analytical results qualified by the designation “J” are considered approximate due to limitations identified during the quality control review. Acetone was not detected above reference criteria in soil/source samples collected from the property [34]. In addition, based on available file information, the use and/or disposal of acetone on the property is not suspected. As a result, the presence of acetone in START sediment samples will not be considered attributable to the E J Abbott property.

Eighteen SVOCs were detected above reference criteria in the sediment samples collected from the Souhegan River and Stony Brook. The maximum concentrations of the 18 SVOCs were detected in sample SD-03 and include the following: acenaphthylene (1,400 ppb); acenaphthene (900 ppb); anthracene (5,200 J ppb); benzo(a)anthracene (11,000 ppb); benzo(a)pyrene (9,300 ppb); benzo(b)fluoranthene (10,000 ppb); benzo(g,h,i)perylene (5,000 ppb); benzo(k)fluoranthene (6,000 ppb); bis(2-ethylhexyl)phthalate (1,400 J, EB ppb); carbazole (730 J ppb); chrysene (11,000 ppb); dibenzo(a,h)anthracene (2,400 ppb); dibenzofuran (810 ppb); fluoranthene (24,000 J ppb); fluorene (1,900 J ppb); indeno(1,2,3-cd)pyrene (4,800 ppb); phenanthrene (17,000 J ppb); and pyrene (23,000 ppb) [34]. Analytical results qualified by the designation EB are considered to be skewed high due to the presence of the substance in equipment blank samples.

It is possible that the SVOCs detected in the sediment samples, particularly in sample SD-03, are mainly the result of runoff from nearby streets and parking areas [51]. However, since benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, fluoranthene, and pyrene were detected above reference criteria in START soil/source samples collected from the property, their presence in START sediment samples will be considered at least partially attributable to the E J Abbott property [31].

Two pesticides (4,4'-DDD and 4,4'-DDT) were detected above reference criteria in the sediment samples collected from the Souhegan River and Stony Brook. 4,4'-DDD was detected in sample SD-09 (11 ppb); and the maximum concentration of 4,4'-DDT was detected in sample SD-02 (20 J ppb) [34]. Although the use and/or disposal of pesticides on the E J Abbott property is not suspected, 4,4'-DDD and 4,4'-DDT were detected above reference criteria in subsurface soil/source samples collected from the property by START [31]. As a result, the presence of these two pesticides in START sediment samples will be considered at least partially attributable to the E J Abbott property.

No PCBs were detected in the sediment samples collected from the Souhegan River and Stony Brook by START [34]. [34].

Two metals (arsenic and copper) were detected above reference criteria in the sediment samples collected from the Souhegan River and Stony Brook. Arsenic was detected in sample SD-09 (31.3 J ppm); and the maximum concentration of copper was detected in SD-01 (10.8 ppm) [33]. Neither arsenic nor copper was detected above reference criteria in START soil/source samples, and historical information does not document the use and/or disposal of these metals on the property [30]. Therefore, the presence of these two metals in START sediment samples will not be considered attributable to the E J Abbott property.

Cyanide was not detected in the sediment samples collected from the Souhegan River and Stony Brook by START [33].

Some of the contaminants detected above reference criteria in sediment samples collected by START were detected at concentrations above their applicable Probable Effects Level (PEL), as defined in the National Oceanic and Atmospheric Administration's (NOAA) Screening Quick Reference Tables (SQuiRTs) standard's for substances in sediments. The following compounds were present in sediment samples SD-03, SD-06, and SD-09 at concentrations exceeding SQiRTs PELs: benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, phenanthrene, and pyrene [54].

START conducted sediment sampling as part of the E J Abbott PA/SI. Based on the analytical results, a release to the surface water pathway of seven SVOCs and two pesticides has been documented. As a result of the release, a Clean Water Act-protected water body and a fishery have been impacted. No other sensitive environments are known to have been impacted. To date, no actions have been taken to address the release to Stony Brook and the Souhegan River.

SOIL EXPOSURE PATHWAY

There are currently no employees or on-site residents associated with the E J Abbott property. Access to the property, which functions as a police station, public park, and municipal parking area, is unrestricted; and the property accommodates a transient population of visitors [13, pp. 5-13]. Approximately half of Lot No. 104-1 (41,780 ft²) is asphalt-paved. The entire area of Lot No. 104-2 (approximately 4,724 ft²) is concrete-paved. The nearest residence is located at 10 Main Street, approximately 225 ft east of the E J Abbott property [10]. An estimated 952 people reside within 1 radial mile of the property [2].

On 21 May 2001, START personnel conducted an on-site reconnaissance of the E J Abbott property. START personnel did not observe any stained soil or terrestrial sensitive environments on the property at the time of the reconnaissance. There are no schools or day-care facilities located within 200 ft of any potential source area. START personnel observed a severely stressed tree planted in the vicinity of the cyanide vault [13, p. 11].

In December 2002, the Town of Wilton completed construction of a police station located on Lot No. 104-1. According to the Wilton Police, no on-site soil was transported offsite during construction [56]. The station is one-story high and has no basement. The building is located at the southern end of Lot No. 104-1, approximately 100 ft north of Burns Hill Road and approximately 40 ft east of the railroad tracks. The Wilton Police are in the process of moving into the building. Lot No. 104-1 is also currently utilized as a public parking area by employees of nearby businesses [13, p. 13; 38; 52].

No known surface soil sampling has been conducted on the E J Abbott property to date. START conducted subsurface soil/source sampling on 14, 15, and 17 January 2002 to document the presence of hazardous substances on the E J Abbott property. START subsurface soil/source sampling is discussed further in the Waste/Source Sampling section of this report. START boring logs are included in Attachment D. Due to unrestricted access at the property and its use as a police station, public park, and municipal parking area, potential impacts to nearby residential populations are unknown.

AIR MIGRATION PATHWAY

In December 2002, the Town of Wilton completed construction of a police station located on Lot No. 104-1 [56]. The station is one-story high and has no basement. Currently, there are no employees on site; however, the Wilton Police are in the process of moving into the building. Lot No. 104-1 is also currently utilized as a public park and municipal parking area by employees of nearby businesses [13, p. 13; 38; 52].

There are currently no on-site residents associated with the E J Abbott property. Access to the property, which functions as a police station, public park, and parking lot, is unrestricted; and the property accommodates a transient population of visitors [13, pp. 5-13]. The nearest residence is located at 10 Main Street, approximately 225 ft northeast of the E J Abbott property [10]. An estimated 952 people reside within 1 radial mile of the property, and an estimated 8,330 people reside within 4 radial miles of the E J Abbott property [2]. Table 13 summarizes the population within 4 radial miles of the E J Abbott property.

Table 13

Estimated Population Within 4 Radial Miles of E J Abbott Memorial Trust

Radial Distance from the E J Abbott Memorial Trust Property (miles)	Estimated Population
On a Source	0
> 0.00 to 0.25	47
> 0.25 to 0.50	133
> 0.50 to 1.00	772
> 1.00 to 2.00	1,348
> 2.00 to 3.00	2,256
> 3.00 to 4.00	3,774
TOTAL	8,330

[2; 13]

Approximately 1,035 acres of wetlands are located within 4 radial miles of the property [7]. According to the NH Department of Resources and Economic Development Division of Forests and Lands, habitat for one State-designated threatened species, *Lespedeza virginica* (Slender Bush Clover), occurs within 4 radial miles of the E J Abbott property [12]. Table 14 summarizes the sensitive environments located within 4 radial miles of the E J Abbott property.

Table 14**Sensitive Environments Located Within 4 Radial Miles of E J Abbott Memorial Trust**

Radial Distance from E J Abbott Memorial Trust (miles)	Sensitive Environment/Species (status)
> 0.00 to 0.25	Clean Water Act-protected water body
	3 acres of Wetland
> 0.25 to 0.50	6 acres of Wetland
> 0.50 to 1.00	9 acres of Wetland
> 1.00 to 2.00	139 acres of Wetland
> 2.00 to 3.00	361 acres of Wetland
> 3.00 to 4.00	State-listed threatened species habitat
	517 acres of Wetland

[7; 12]

During the on-site reconnaissance, START personnel conducted ambient air monitoring using an FID, a PID, a combustible gas indicator, and a radiation meter. No readings above background levels were recorded during the on-site reconnaissance [13 pp. 4 - 22].

START did not collect ambient air samples as part of the E J Abbott PA/SI. No quantitative laboratory air samples are known to have been collected to date. Based on available data, no release of hazardous substances to the ambient air from on-site sources is known or suspected to have occurred, and no impacts to nearby residential populations or sensitive environments are known or suspected.

SUMMARY

The E J Abbott Memorial Trust (E J Abbott) property is located at the junction of Burns Hill Road and Route 31 (Main Street) in Wilton, Hillsborough County, New Hampshire (NH). The 2.2-acre property is identified on the Town of Wilton Tax Assessor's Map J as Lot Nos. 102, 103, 104-1, and 104-2. The geographical coordinates, as measured from the center of the property, are 42° 50' 27.9" north latitude and 71° 44' 26.3" west longitude. The Town of Wilton owns Lot Nos. 102 and 104-1. Conflicting information exists regarding current ownership of Lot Nos. 103 and 104-2. According to the Wilton Tax Assessor's Office, the E J Abbott Memorial Trust owns Lot Nos. 103 and 104-2. Additionally, according to the Town of Wilton, Mrs. Mary Abbott of Hollis, NH, is the sole trustee of the E J Abbott Memorial Trust. According to Mrs. Abbott, she was the President of the "Edward J. Abbott Memorial Trust, Inc.", an entity which had owned the property. However, Mrs. Abbott maintains that this entity was dissolved on 1 February 1991.

The E J Abbott property is located in a residential and commercial area. Lot Nos. 102 and 103 are located on the east bank of Stony Brook, along Route 31. Lot No. 102 is currently occupied by a war veterans monument, and grassy and landscaped areas. Lot No. 103 is an empty, triangular-shaped lot adjacent to (south of) Lot No. 102. Lot No. 104-2 is a rectangular-shaped lot located on the west bank of Stony Brook, along Burns Hill Road, and contains a concrete underground "cyanide vault," in which containers of spent sodium cyanide ash were historically allegedly deposited. Lot No. 104-1, located adjacent to (north of) Lot No. 104-2, is occupied by a one-story building operated by the Town of Wilton Police Department, a municipal parking area (a portion of which is asphalt-paved), a band of trees, and a concrete-paved walkway. The building is located at the southern end of Lot 104-1, north of Burns Hill Road and east of railroad tracks. The Town of Wilton completed construction of the building in December 2002, and the Wilton Police are in the process of moving into the building. Lot No. 104-1 is also currently utilized as a parking area by employees of nearby businesses. The Town of Wilton maintains the landscaped areas and plows the parking areas on Lot No. 104-1.

Lot Nos. 104-1 and 104-2 are bordered by Stony Brook to the north; Stony Brook to the east; Burns Hill Road to the south; and railroad tracks to the west. A commercial property owned by Wilton Main Street Associates (Wilton Associates) is located on Lot No. 105 across Burns Hill Road, south of Lot. Nos. 104-1 and 104-2. Lot No. 102 is bordered by Stony Brook and a private, vacant lot to the north; Main Street to the east; Lot No. 103 to the south; and Stony Brook to the west. Lot No. 103 is bordered by Lot No. 102 to the north and east; Burns Hill Road to the south; and Stony Brook to the west. Vehicular and pedestrian access to the property is unrestricted, as portions of it are currently utilized as a public park and a municipal parking area.

In about 1964, Abbott Machine Company (AMC), a manufacturer of metal textile machinery whose facility was located on Howard Street in Wilton, reportedly disposed of six 55-gallon drums and four "furnace boxes" into the water wheel pit of a former power generating dam ("cyanide vault") located on the EJ Abbott property along the western bank of Stony Brook. The drums and furnace boxes contained ash from a spent sodium cyanide case-hardening solution. The volume of the cyanide vault has been estimated to measure approximately 29 feet (ft) long by 26 ft wide by 8 ft deep. The top of the cyanide vault is estimated to be 3 to 4 ft below ground surface (bgs), and is covered by a concrete walkway. No other wastes are known to have been disposed of on the property.

In 1986, Goldberg, Zoino, & Associates, Inc. (GZA), a consultant for E J Abbott, initiated a hydrogeologic assessment of the E J Abbott property. The assessment included the completion of a magnetometer survey, the advancement of soil borings, the collection of soil samples, the installation of monitoring wells, and the collection of groundwater and surface water samples. Cyanide, cyanate, and ammonia were detected in groundwater and surface water samples.

In January 2002, as part of a combined Preliminary Assessment/Site Inspection (PA/SI), Roy F. Weston Inc. (now known as Weston Solutions, Inc.) Superfund Technical Assessment and Response Team 2000 (START) personnel collected soil/source samples from potential source areas on the E J Abbott property. In February 2002, START personnel collected a soil/source sample from a potential source area on the E J Abbott property and sediment samples from the surface water pathway, to determine if there has been a release of hazardous substances (associated with the E J Abbott property) to surface water. In addition, START personnel collected seven groundwater samples from monitoring wells installed on and in the vicinity of the E J Abbott property, to determine if there has been a release of hazardous substances (associated with the E J Abbott property) to groundwater.

Seven semivolatile organic compounds (SVOCs), three pesticides, four metals, and cyanide were detected in soil/source samples; one volatile organic compound (VOC), 18 SVOCs, two pesticides, and two metals were detected in sediment samples; and one VOC, eight metals, and cyanide were detected in groundwater samples above reference criteria. Hazardous substances detected in the groundwater and sediment samples (which were also detected in soil samples collected from the property, or are known to be used/disposed on the property and are, therefore, partially attributable to the E J Abbott property) included three metals and cyanide in groundwater samples, and seven SVOCs and two pesticides in sediment samples. The three metals and cyanide detected in the groundwater samples were not detected at concentrations exceeding their applicable New Hampshire Department of Environmental Services Ambient Groundwater Quality Standards.

An estimated 3,600 and 3,152 people are served by public and private water supply wells, respectively, within 4 radial miles of the E J Abbott property. The nearest public groundwater drinking water supply well is an overburden well located approximately 2.1 miles southwest of the property. The location of the nearest private drinking water well is unknown. Analytical results of groundwater samples collected by START in 2002 from the E J Abbott property indicated the presence of three metals and cyanide that are considered to be attributable to the E J Abbott property. However, based on a comparison to State standards, no impacts to nearby public drinking water sources are known or suspected.

Stormwater runoff on the property either accumulates in depressions on the ground surface, flows into the two catchbasins located near the center of the property, or flows east into Stony Brook. The most upstream probable point of entry of contaminants from on-site sources to the surface water pathway is located at the northern extent of the property, along Stony Brook. Sensitive environments located along the downstream surface water pathway from the E J Abbott property include Clean Water Act (CWA)-protected water bodies, fisheries (the Souhegan River and Stony Brook), and wetlands. There are no surface water drinking water intakes located along the downstream surface water pathway. Analytical results of sediment samples collected by START in 2002 indicated the presence of seven SVOCs and two pesticides that are considered at least partially attributable to the E J Abbott property.

In December 2002, the Town of Wilton completed construction of a police station located on Lot. No. 104-1. Currently, there are no employees on site; however, the Wilton Police are in the process of moving into the building. There are currently no on-site residents associated with the E J Abbott property. An estimated 952 people reside within 1 radial mile, and an estimated 8,330 people reside within 4 radial miles of the property. The property, which functions as a police station, public park, and municipal parking area, accommodates a transient population of visitors. No known schools or day-care facilities are located within 200 ft of the E J Abbott property, and there are no known terrestrial sensitive environments located on the property. The nearest residence is located approximately 225 ft east of the E J Abbott property. Access to the property is unrestricted due to its use as a police station, public park, and municipal parking area. No known surface soil sampling has been conducted on the E J Abbott property to date. Analytical results of subsurface soil/source samples collected from the E J Abbott property indicated the presence of seven SVOCs, three pesticides, four metals, and cyanide. No impacts to nearby residential populations are known or suspected. Sensitive environments located within 4 radial miles of the E J Abbott property include approximately 1,013 acres of wetlands, Clean Water Act (CWA)-protected water bodies, fisheries (the Souhegan River and Stony Brook), and habitat for one State-threatened species.

EXHIBIT 9

From: [Jane Farrell](#)
To: [Boudrot, Diane](#)
Subject: RE: Map J - Lot 104 (EJ Abbot Memorial Trust)
Date: Friday, February 11, 2022 6:26:06 PM

Your welcome. Have a good weekend!

From: Boudrot, Diane [mailto:boudrot.diane@epa.gov]
Sent: Friday, February 11, 2022 6:22 PM
To: Jane Farrell
Subject: RE: Map J - Lot 104 (EJ Abbot Memorial Trust)

Thank you so much for this info! I will look through everything on Monday.

Diane Boudrot
Paralegal Specialist
US EPA - Region 1
5 PO Square - ORC04-4
Boston, MA 02109
617-918-1776

From: Jane Farrell <jfarrell@wiltonnh.gov>
Sent: Friday, February 11, 2022 3:50 PM
To: Boudrot, Diane <boudrot.diane@epa.gov>
Subject: RE: Map J - Lot 104 (EJ Abbot Memorial Trust)

Hi Diane,

I apologize for the delay in responding to your inquiry.

I contacted our Land Use person, Michele Decoteau, and she compiled the following information available through her link as follows:

https://drive.google.com/drive/folders/1crYbzyC2NZZbgXAwAyl_JWiREhbk7opT?usp=sharing

It may contain more information than you need but it does give detailed historical information about J-104 and its subdivision into two lots. The parcel is now known as J-104-01 and J-104-02.

Our tax records show the property was, per Select Board vote, approved to be tax exempt beginning in 2007. My computer historical tax file shows the last tax bill was issued in 2006 for a total of \$71 (1st issue \$26, 2nd issue \$45). These records further show all billing 1991 through 2006 were abated by the respective Selective Boards.

I hope this information helps in your research. If there is anything else you needs please let us know.

Jane Farrell

From: Boudrot, Diane [<mailto:boudrot.diane@epa.gov>]
Sent: Friday, February 11, 2022 11:33 AM
To: Jane Farrell
Subject: FW: Map J - Lot 104 (EJ Abbot Memorial Trust)

Hello Jane,

I'm trying to find information about the EJ Abbot property (Map J- lot 104). Can you tell when the property tax was last paid on this property and who paid the tax and how much is owed in back taxes if any?

Thank you!

Diane Boudrot
Paralegal Specialist
US EPA - Region 1
5 PO Square - ORC04-4
Boston, MA 02109
617-918-1776

From: Boudrot, Diane
Sent: Wednesday, February 9, 2022 1:23 PM
To: tctc@wiltonnh.gov
Subject: Map J - Lot 104 (EJ Abbot Memorial Trust)

Hello,

I'm hoping you can help me with the above mentioned property. Can you tell me who last paid the property tax on this property and when? How much is old in back taxes? Any help would be appreciated.

Thank you!

Diane Boudrot
Paralegal Specialist/Enforcement Coordinator
US EPA - Region 1
5 PO Square - ORC04-4
Boston, MA 02109
617-918-1776

EXHIBIT 10

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REPORT OF TAX LIEN REDEMPTIONS
Town of Wilton, NH

DATE OF REPORT: 06/20/02

PAGE# 1 OF 5

PROPERTY REDEEMED BY OWNER UNLESS OTHERWISE NOTED

OWNER OR PERSON TAXED AND DESCRIPTION OF REAL ESTATE	VOLUME PAGE	DATE OF EXECUTION	LIEN AMOUNT	DATE REDEEMED
OWNER: Abbott Memorial Trust, E J Abbot, Robert A PROPERTY: L/O Main Street MAP/LOT: J-103 REDEEMED BY: Abated by Selectmen	5340/ 1740	05/15/92	45.50	05/07/02
OWNER: Abbott Memorial Trust, E J Abbot, Robert A PROPERTY: L/O Main Street MAP/LOT: J-103 REDEEMED BY: Abated by Selectmen	5436/ 943	05/11/93	44.50	05/07/02
OWNER: Abbott Memorial Trust, E J Abbot, Robert A PROPERTY: L/O Main Street MAP/LOT: J-103 REDEEMED BY: Abated by Selectmen	5576/ 692	08/25/94	46.55	05/07/02
OWNER: Abbott Memorial Trust, E J Abbot, Robert A PROPERTY: L/O Main Street MAP/LOT: J-103 REDEEMED BY: Abated by Selectmen	5633/ 1439	06/06/95	45.50	05/07/02
OWNER: Abbott Memorial Trust, E J Abbot, Robert A PROPERTY: L/O Main Street MAP/LOT: J-103 REDEEMED BY: Abated by Selectmen	5722/ 1255	05/23/96	46.50	05/07/02

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REPORT OF TAX LIEN REDEMPTIONS
Town of Wilton, NH

DATE OF REPORT: 06/20/02

PAGE# 2 OF 5

PROPERTY REDEEMED BY OWNER UNLESS OTHERWISE NOTED

OWNER OR PERSON TAXED AND DESCRIPTION OF REAL ESTATE	VOLUME PAGE	DATE OF EXECUTION	LIEN AMOUNT	DATE REDEEMED
OWNER: Abbott Memorial Trust, E J Abbot, Robert A PROPERTY: L/O Main Street MAP/LOT: J-103 REDEEMED BY: Abated by Selectmen	5813/ 767	05/13/97	57.72	05/07/02
OWNER: Abbott Memorial Trust, E J Abbot, Robert A PROPERTY: L/O Main Street MAP/LOT: J-103 REDEEMED BY: Abated by Selectmen	5947/ 1481	05/19/98	47.19	05/07/02
OWNER: Abbott Memorial Trust, E J Abbot, Robert A PROPERTY: L/O Main Street MAP/LOT: J-103 REDEEMED BY: Abated by Selectmen	6112/ 1127	05/18/99	58.27	05/07/02
OWNER: Abbott Memorial Trust, E J Abbot, Robert A PROPERTY: L/O Main Street MAP/LOT: J-103 REDEEMED BY: Abated by Selectmen	6245/ 874	05/23/00	46.18	05/07/02
OWNER: Abbott Memorial Trust, E J Abbot, Robert A PROPERTY: L/O Main Street MAP/LOT: J-103 REDEEMED BY: Abated by Selectmen	6441/ 2542	06/05/01	57.29	05/07/02
OWNER: Abbott Memorial Trust, E J PROPERTY: Burns Hill Road MAP/LOT: J-104-02 REDEEMED BY: Abated by Selectmen	5436/ 943	05/11/93	69.14	05/07/02
OWNER: Abbott Memorial Trust, E J PROPERTY: Burns Hill Road MAP/LOT: J-104-02 REDEEMED BY: Abated by Selectmen	5576/ 692	08/25/94	75.79	05/07/02

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Exhibits to Affidavit of Diane Boudrot

1. Site Map
2. A copy of the 1961 deed of transfer of the property to E.J. Abbott Memorial Trust, Inc. that is recorded in the Hillsborough County Registry of Deeds at Book 1638, page 363
3. Town of Wilton, NH property cards pertaining to E.J. Abbott Memorial Trust (J-103 & J-104-2)
4. May 2022 email correspondence with the Clerk and Collector
5. NH Secretary of State formation and dissolution of Trust dates
6. Excerpts from October 1, 2020, Department of Environmental Services (DES) - Phase I Environmental Site Assessment (Appendix C)
7. Obituaries of Mary J. Abbott, Samuel L. Abbott, Jr. and online gravesite of Samuel L. Abbott
8. Excerpts of March 24, 2003, Weston Solutions - Final Preliminary Assessment/Site Inspection Report
9. February 9 and February 11, 2022, emails from EPA to the Town of Wilton, NH and Jane Farrell, respectively
10. Town of Wilton Tax redemption documents for parcel J-103

EXHIBIT B

**UNITED STATES DISTRICT COURT
DISTRICT OF NEW HAMPSHIRE**

**IN THE MATTER OF THE
ADMINISTRATIVE WARRANT**

**In re: E.J. Abbott Memorial Site
Parcel ID: J, 103 and 104-02
Wilton, New Hampshire**

Case No.

AFFIDAVIT OF KAREN WAY

I, Karen Way, hereby make the following affidavit:

1. I am employed by EPA as an On-Scene Coordinator (“OSC”), and I am currently assigned to the E.J. Abbott Memorial Trust Site (“Site”), located in the Town of Wilton, New Hampshire. I have been employed by EPA for 21 years and have been in my current position as an OSC for 13 years.

2. As an OSC for the Site, part of my responsibility is to conduct Preliminary Assessments/Site Investigations (“PA/SI”) to determine the nature and extent of contamination at hazardous waste sites and appropriate response action to address actual or threatened release of hazardous substances into the environment of or from such sites. If the results of the PA/SI demonstrate a need for a removal action to stabilize or remove threats to public health or the environment from such releases or threatened releases, it is also my responsibility to recommend the extent and nature of that removal action, and to direct all activities associated with the response action. These hazardous substance response actions are undertaken pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), 42 U.S.C. § 9601, *et seq.*

3. I make this Affidavit in support of the United States' *Ex Parte* Application for an Administrative Warrant for Access to the property lots J, 103 and J, 104-02, located on Burns Hill Road ("the Site"), consisting of 0.13-acres. A copy of the Site map is attached as Exhibit 1 to the accompanying Affidavit of Diane Boudrot ("Boudrot Aff."). The Site is further described in the 1961 deed transferring the Site to the E.J. Abbott Memorial Trust, Inc. ("the Trust") as recorded in the Hillsborough County Registry of Deeds at Book 1638 page 363. *See* Boudrot Aff., Exhibit 2 (the deed).

4. The statements in this affidavit are based on my personal knowledge; on my experience as an OSC for EPA; on knowledge I gained from reviewing files and documents regarding the Site that are in the possession of New Hampshire Department of Environmental Services ("NHDES"), EPA, and the Town of Wilton; on knowledge I gained from reviewing publicly available information; and on knowledge I gained during discussions with representatives of EPA, NHDES and Town of Wilton officials.

Site Background:

5. The Site is located on Burns Hill Road, including two lots, Parcel ID, J-103 and J-104-02, Town of Wilton, the County of Hillsborough, New Hampshire. *See* Boudrot Aff., Exhibit 2 (Site Map). Lot J-103 is an approximate 0.02-acre triangular shaped parcel located within the Stony Brook channel. A stone retaining wall bounds the eastern edge of the lot, while the Burns Hill Road bridge bounds the southern edge. Lot J-104-02 is an approximate 0.11-acre rectangular parcel located along the western edge of Stony Brook (adjacent to the Burns Hill Road bridge abutment). This lot comprises a concrete surfaced walking path and retaining wall abutting Stony Brook but is otherwise vacant. *See* Boudrot Aff., Exhibit 6 (2020 Assessment Report), p. 3-1.

6. A concrete structure that may have contained the former water wheel of an adjacent dam underlies a portion of the walkway at Lot J-104-02. The structure is the location of the historical disposal of sodium cyanide wastes that were generated at the nearby Abbott Machine Company (AMC) as part of the production of textile manufacturing machinery. Six 55-gallon drums and four furnace boxes containing spent sodium cyanide-case hardening solution were reportedly disposed in the structure circa 1964. *See Boudrot Aff., Exhibit 8 (2003 Assessment Report)*, p. 6.

7. In 1987, Goldberg-Zoino & Associates, Inc. (GZA) were contracted by the Trust to assess environmental conditions in the vicinity of the sodium cyanide waste disposal area. Assessment activities included the installation of monitoring wells and collection of soil and groundwater samples from Stony Brook. Ammonia and cyanate were detected in the surface water samples. GZA recommended continued groundwater monitoring be conducted; however, additional monitoring activities were not completed. *See Exhibit 1 hereto, 1987 Hydrological Assessment*, p. 12.

8. In 2003, at the request of EPA, Weston Solutions, Inc. completed a Preliminary Assessment/Site Investigation that included the installation of monitoring wells and collection of soil and groundwater samples in the vicinity of the disposal area, as well as sediment samples from Stony Brook and the Souhegan River. *See Boudrot Aff., Exhibit 8 (2003 Assessment Report)* p.38. Cyanide was detected in one groundwater sample collected hydraulically upgradient of the sodium cyanide waste disposal area and in a soil sample collected from a rock wall located immediately downgradient of the disposal area adjacent to Stony Brook. *Id.* p. 38.

9. (a) In a Phase 1 Environmental Site Assessment (ESA) report (dated October 1, 2020) prepared on behalf of the Nashua Regional Planning Commission and the Town of Wilton,

Crede Associates, LLC concluded that a material threat of release to the environment exists at the Site due to the disposal of sodium cyanide waste in the subsurface concrete structure. The report noted documented soil and groundwater impacts associated with the historical industrial use of the Site. These conclusions were based on existing sampling data, and the report recommended further environmental assessment to confirm or dismiss the identified risk. *See* Boudrot Aff., Exhibit 6 (2020 Assessment Report), p. ES-11-1.

(b) According to the Agency for Toxic Substances and Disease Registry, “exposure to lower levels of cyanide may result in breathing difficulties, heart pains, vomiting, blood changes, headaches, and enlargement of the thyroid gland.” In terms of the environment, “at the high concentrations, cyanide becomes toxic to soil microorganisms.” *See* <https://www.atsdr.cdc.gov/toxfaqs/tfacts8.pdf>

10. On September 27, 2021, the NHDES requested the EPA Removal Program’s assistance to perform additional assessment activities on the Site. *See* Exhibit 2 hereto, NHDES form. NHDES requested EPA’s assistance to determine whether any hazardous substances remain on the Site that pose a risk to human health or the environment based upon the release, or threat of release, of hazardous substances. *Id.*

A Preliminary Assessment/Site Investigation is Necessary:

11. Based on the foregoing, I believe that a release or threat of release of hazardous substances may exist on the Site and additional assessment is required.

12. During EPA’s proposed PA/SI work, EPA personnel and their contractors would (1) conduct site walks to determine whether any hazardous substances are visibly present; (2) survey the Site and take measurements of the topography of the Site to obtain information relevant to the selection of the sampling locations on the Site; (3) document and photograph

conditions on the Site; (4) collect soil, sediment, water and air samples as may be necessary; (5) sample any solids or liquids stored or disposed of on-site; (6) drill or excavate holes for investigation of conditions under the ground surface; and (7) take other actions related to the investigation of surface or subsurface contamination resulting from the release or threat of further releases at the Site. These measures are necessary to assess the extent of the contamination at the Site and to determine whether a response action may be needed to address any risks posed by the contamination.

13. The period during which EPA intends to perform the necessary PA/SI at the Site is limited to 180 days. This 180-day period will be needed to perform an initial site-walk and to coordinate with our contractors to develop a Sampling and Analysis Plan, a Site Specific Health and Safety Plan, and to schedule any EPA Laboratory Services Field Personnel (e.g., geoprobe teams) and subsequent laboratory analysis of all samples collected. These will include, but are not limited to, soil, surface water and sediment samples.

14. Receipt of sample analysis can exceed 30 days and based upon the results, additional sampling may need to be conducted to determine the extent of contamination, which will add at least 30 more days for analysis.

15. The Stony Brook Dam is part of this Site as well and it may also require some sampling of sediments in and around the dam and on the surrounding banks. This kind of Site sampling can add additional complexities and time to the task of sampling and assessing risk.

16. Unforeseen weather conditions and potential delays due to COVID-19 are also considering in the 180-day request.

17. Access to the Site is required to perform the PA/SI.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

/s/ Karen Way
Karen Way
On-Scene Coordinator
U.S. EPA, Region I

The affiant appeared before me by telephonic conference on this date and affirmed under oath the content of this affidavit and application.

Date: 6/23/2022

Audrea K. Mastro

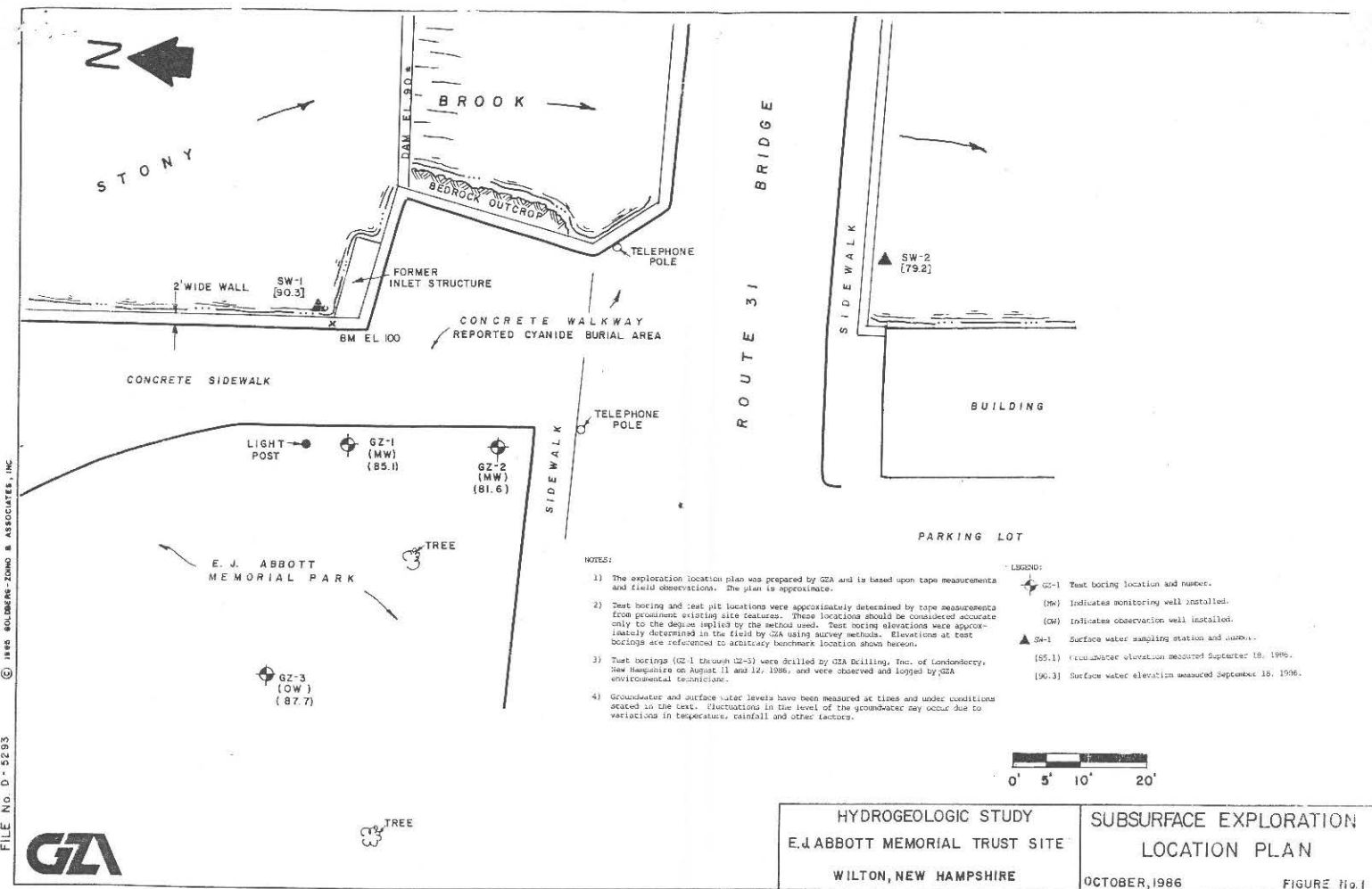


U.S. Magistrate Judge

Exhibits to Affidavit of Karen Way

1. 1987 Hydrological Assessment
2. NHDES Removal Action Request form

EXHIBIT 1



HYDROGEOLOGIC ASSESSMENT
E.J. ABBOTT MEMORIAL TRUST SITE
WILTON, NEW HAMPSHIRE

Prepared for:

E.J. Abbott Memorial Trust
North Hampton, New Hampshire

Prepared by:

Goldberg-Zoino & Associates, Inc.
Manchester, New Hampshire

February 1987
File No. D-5293

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GOLDBERG • ZOINO & ASSOCIATES, INC.
GEOTECHNICAL-GEOHYDROLOGICAL CONSULTANTS

February 13, 1987
File No. D-5293C

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MATHEW A. DIPILATO, P.E.
DISTRICT MANAGER

E.J. Abbott Memorial Trust
16 Atlantic Avenue
North Hampton, New Hampshire 03862

Attention: Ms. Joyce Lawton

Re: Hydrogeologic Assessment
E.J. Abbott Memorial Trust Site
Wilton, New Hampshire

Dear Ms. Lawton:

This report presents the results of Goldberg-Zoino & Associates, Inc. (GZA) hydrogeologic study at the above-referenced site. This work was completed in accordance with our executed agreement dated February 27, 1986.

After you have had a chance to review the report, GZA would be pleased to discuss any comments you may have prior to your formal submittal of the report to the New Hampshire Department of Environmental Services (DES).

GZA appreciates the opportunity to be of service to the E.J. Abbott Memorial Trust on this project. GZA trusts that our findings and recommendations outlined in this report will be responsive to your needs at this time. We look forward to continuing to assist you. The undersigned will contact you shortly to discuss any comments you may have.

Very truly yours,

GOLDBERG-ZOINO & ASSOCIATES, INC.

Roger B. Keilig
Geotechnical Engineer

Mathew A. DiPilato, P.E.
District Manager

Thomas E. Roy, P.E.
Project Reviewer

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APPENDIX A	LIMITATIONS
APPENDIX B	TEST BORING LOGS
APPENDIX C	MAGNETOMETER SURVEY
APPENDIX D	LABORATORY RESULTS FOR CHEMICAL ANALYSES

1.00 INTRODUCTION

This report summarizes the results of a hydrogeologic study completed by Goldberg-Zoino & Associates, Inc. (GZA) for E.J. Abbott Memorial Trust (Trust) of North Hampton, New Hampshire. This study was performed in accordance with a work plan submitted to the Trust on February 27, 1986 as modified based upon input by State regulatory officials. It is noted that this report is subject to the Limitations set forth in Appendix A.

1.10 STATEMENT OF PURPOSE

The purpose of GZA's study for the Trust is to assess environmental conditions in the vicinity of a suspected cyanide disposal site situated adjacent to the southeastern section of the E.J. Abbott Memorial park in Wilton, New Hampshire, and to provide recommendations for additional site work if necessary.

1.20 SCOPE OF SERVICES

Consistent with the purpose outlined above, GZA performed the following services at the subject site as part of the present hydrogeologic evaluation:

- . Conducted a magnetometer survey in the vicinity of the suspected cyanide disposal area.
- . Drilled two test borings with monitoring well installations within the site in the vicinity of the suspected cyanide disposal area.
- . Sampled and analyzed groundwater samples from the two monitoring wells and surface water samples from two stations along Stony Brook for volatile organic compounds (VOC's), free cyanide, free cyanate, ammonia, and pH.
- . Field screened soil samples obtained from test borings for the presence of VOC's using an organic vapor meter.
- . Prepared this report summarizing work performed, the data collected, conclusions and recommendations for further work at the site.

2.00 SITE BACKGROUND

The E.J. Abbott Memorial Trust Park consists primarily of a groomed lawn with lights and benches situated along the western side of Stony Brook and to the north of Route 31 in Wilton, New

Hampshire. An approximately 29-foot by 26-foot concrete covered walkway is situated adjacent to the southeastern section of the park. This walkway connects to the north with an approximately 12-foot wide concrete covered sidewalk situated along the bank of Stony Brook. The park was established in 1984. Site features discussed herein and a site locus plan are presented on Figure 1.

An old dam approximately 10 feet in height with an associated underground penstock/raceway is situated to the north of the aforementioned concrete walkway. This dam in the past served as an appurtenant facility to a former mill structure which was located in the area of the present concrete walkway. The former mill structure was reportedly torn down prior to the early 1960's and the foundation hole was subsequently backfilled. The appurtenant penstock/ raceway structure was also reportedly backfilled with concrete.

Information provided to GZA by past employees of the Abbott Machine Company indicated that in the early 1960's spent cyanide case-hardening salts used for the treatment of metal parts were disposed by placement in an old building foundation located adjacent to the park. Information provided to GZA indicates that the cyanide case-hardening salts were used in the treatment of metal parts until the cyanide content of the salts deteriorated to the point where the salts would be ineffective in the treatment of metal parts. The salts would then be removed from the heat treatment area and stored prior to disposal. The reported disposal method involved pouring a 2- to 3-foot thick layer of fresh concrete into the open building foundation excavation, followed by the disposal of waste cyanide case-hardening salt in the central portion of the concrete and subsequent covering of the waste cyanide salt with additional concrete. The disposal of additional waste cyanide salt was then repeated prior to covering the waste with additional concrete. The approximate dimensions of the concrete disposal area are 29 feet long by 26 feet wide by 8 feet deep with the top of the concrete disposal area estimated to be 3 to 4 feet below the surface of the ground which is covered by the aforementioned concrete walkway.

Topography within the site area is relatively flat with a slight downward trending grade to the southeast towards Stony Brook. Topography to the west and north of the site is characterized by hilly terrain and a valley associated with the Souhegan River, which is situated approximately 150 to 200 feet to the southeast of the site.

Wilton Town officials contacted by GZA in regard to the subject site indicated that the general areas surrounding the site and the Wilton downtown area situated to the south and southeast of the site are serviced by municipal water supply and sewage disposal.

3.00 FIELD EXPLORATIONS

The field explorations portion of this study consisted of a magnetometer survey, two test borings and monitoring well installations (GZ-1 and GZ-2), and one test probe with an appurtenant observation well installation (GZ-3) in the vicinity of the suspected cyanide disposal site.

The magnetometer survey was conducted at the request of State regulatory officials to assess the suspected cyanide disposal area for the presence of buried metal. Information provided by persons familiar with the site waste disposal practices indicated that metal containers used to hold the waste cyanide salts may have been disposed in the concrete along with the waste cyanide salts.

Test boring monitoring well locations were selected with the concurrence of State regulatory officials to assess subsurface conditions in the area of the suspected cyanide disposal site. Feasible locations for test boring monitoring well installations were limited to the area immediately adjacent to the western edge of the suspected cyanide disposal area due to the presence of overhead utilities and Route 31 to the south, and Stony Brook to the east. Borings were not performed within the suspected cyanide disposal area itself so as not to disturb potentially harmful material which may be present therein.

Test probe observation well GZ-3 was installed for this study with the intent only to provide groundwater level data at the selected location. The test probe and test borings were approximately located by GZA personnel with a 100-foot tape measuring from existing prominent site features. Approximate locations of the test probe and test borings are shown on Figure 1. Test boring locations should be considered accurate only to the degree implied by the measuring method used to locate them. Logs of the test probe and test borings were prepared by GZA personnel and are enclosed in Appendix B.

3.10 MAGNETOMETER SURVEY

A magnetometer survey was performed at the request of State officials in the area of the suspected cyanide disposal area on July 28, 1986 to locate potential magnetic anomalies which may be indicative of buried metal objects such as waste cyanide salt containers. The results of the magnetometer survey were utilized to locate the test borings discussed in Section 3.20. The survey was performed by Dr. John F. Kick of Dunstable, Massachusetts. Measurements were conducted using a EG&G Memory-Mag G-856, with measurements taken at 5-foot intervals along traverses which were



5 feet apart. Results of the magnetometer survey as prepared by Dr. Kick are presented in Appendix C with magnetic anomalies depicted on the figures attached thereto.

3.20 TEST BORINGS AND MONITORING WELL INSTALLATIONS

The test borings and probe were drilled on August 11 and 12, 1986 by GZA Drilling, Inc. of Londonderry, New Hampshire. The test borings were advanced using 3-1/4-inch I.D. hollow stem augers or with NW (3-inch O.D.) casing using rotary wash drilling techniques. Standard penetration tests were performed at selected intervals within the boreholes. The Standard Penetration Test (SPT) consists of driving a 1-3/8-inch I.D. split-spoon sampler with a 140-pound hammer free-falling 30 inches. The blows per 6 inches of penetration were recorded for the total penetration of the spoon in each test. The sum of the blows from 6 to 18 inches of penetration is termed the Standard Penetration Resistance (N-value) and is a measure of the in-situ density of the soil. Soil samples recovered from the spoon were visually classified in the field by a GZA engineer.

Test borings GZ-1 and GZ-2 encountered refusal conditions at depths of 19.5 feet and 22.5 feet, respectively. Refusal is defined herein as the inability to advance the boring with the augers and casing, or to drive the split-spoon sampler 6 inches or less with a driving effort of 100 SPT blows or greater. These test borings were terminated after coring approximately 5 feet of bedrock using an BX (1-5/8-inch I.D. core diameter) core barrel. The rock corehole was then backfilled with bentonite pellets subsequent to the coring operations.

Monitoring wells fully penetrating the overburden soils were installed to intercept groundwater. Well construction consisted of 1-1/2-inch flush-joint threaded sections of slotted (0.01-inch) PVC well screen and riser pipe. A 10-foot long well screen was placed within each of test borings GZ-1 and GZ-2. PVC cement was not used in joining pipe sections. The annulus between the borehole and the well screen was backfilled with clean filter sand to a height of approximately 1 foot above the top of the well screen. The annulus between the riser pipe and the borehole was subsequently backfilled with formation material which had been brought to the ground surface during drilling operations. A bentonite seal was placed around each well approximately 2 to 3 feet below ground surface to reduce the potential for the infiltration of surface water through the borehole annulus. Curb boxes were set in cement at the ground surface to protect the wells from unauthorized entry. The logs of each boring, including soil descriptions and monitoring well installation details, are included as Appendix B.

Test probe GZ-3 was drilled to a depth of 15 feet without soil sampling. A groundwater observation well with a 5-foot long section of well screen and a filter sand pack was installed in test probe GZ-3 at completion using the same general procedures as were used for the installation of monitoring wells GZ-1 and GZ-2. A log of test probe GZ-3 is also enclosed in Appendix B.

Following well installations, relative ground surface elevations at monitoring well locations GZ-1 and GZ-2 and observation well location GZ-3 were approximately determined by GZA personnel using a transit and referencing elevations to an arbitrary benchmark elevation established at the top of the walkway curb at the approximate location indicated on Figure 1.

4.00 SUBSURFACE CONDITIONS

The generalized subsurface profile encountered in test borings GZ-1 and GZ-2 consisted of an approximately 10-foot thick layer of variable fill materials overlying an approximate 10-foot thickness of natural granular soils underlain, in turn, by bedrock.

4.10 FILL

Fill materials encountered in test borings GZ-1 and GZ-2 consisted generally of brown to dark brown, fine to coarse sand with varying amounts of gravel, silt and building rubble. A variable mixture of sand and concrete was encountered in test boring GZ-1 over a depth interval of 5 to 6.5 feet.

4.20 NATURAL GRANULAR SOILS

Underlying fill materials within test borings GZ-1 and GZ-2, a layer of granular soils comprised generally of medium dense, brown, fine to coarse sand with little to trace amounts of silt and trace amounts of gravel was encountered. This layer was observed to be approximately 5-feet thick in test boring GZ-1 and 11-feet thick in test boring GZ-2. In test boring GZ-1, the sand layer was underlain by an approximately 4.5-foot thick medium dense, brown, fine to coarse sand with some gravel and trace amounts of silt to a depth of approximately 19.5 feet, whereupon bedrock was encountered. A relatively thin layer of dense, fine to coarse sand and rock fragments was encountered beneath the sand layer and overlying bedrock in test boring GZ-2 over a depth interval of 21 to 21.5 feet.



4.30 BEDROCK

Rock coring was performed in test borings GZ-1 and GZ-2 to substantiate bedrock conditions. Bedrock encountered consisted of a hard, moderately weathered, moderately to highly fractured white granite and gray biotite schist. Depth intervals of cored bedrock were from 19.5 to 24 feet in GZ-1, and 22.5 to 27.5 feet in GZ-2. A summary of measured bedrock surface elevations is presented in Table 1. Review of these data, including measurements of the exposed bedrock elevations in the stream bed of Stony Brook downgradient of the dam, indicates that the bedrock surface beneath the site tends to slope downward to the southeast.

4.40 GROUNDWATER CONDITIONS

Groundwater and surface water level measurements were made on August 24 and September 18, 1986 in the two monitoring wells and one observation well installed for this study, as well as at the two selected surface water sampling locations. Groundwater and surface water level and elevation data from these wells are compiled in Table 2. Observed depths of groundwater ranged from about 13 to 14 feet within monitoring well GZ-1, from about 17 to 18 feet in monitoring well GZ-2, and from about 10 to 11 feet in observation well GZ-3. Referencing to the arbitrary benchmark defined above, these levels correspond to elevations ranging from an approximate elevation of 88 feet at GZ-3, and an approximate elevation of 82 feet at GZ-2.

GZA also measured the surface water elevations at sampling stations SW-1 and SW-2 along Stony Brook. Referencing to the arbitrary benchmark defined above, the measured surface water elevations corresponded approximately to an elevation of 90 feet at location SW-1 and an approximate elevation of 79 feet at location SW-2.

Groundwater elevations at test boring and test probe locations, and surface water elevations at stations SW-1 and SW-2 are shown on Figure 1. GZA's interpretations of approximate groundwater flow directions using these data are also provided on Figure 1. Review of Figure 1 indicates that groundwater flows in a general southeasterly direction in the vicinity of the site with the exception of a localized area of southwesterly to southerly groundwater flow likely due to the impoundment of water behind the dam. This groundwater flow direction is consistent with the topographic setting of the site as discussed previously.

5.00 SOIL AND GROUNDWATER SAMPLING

5.10 SOIL SAMPLING

Soil samples were collected from the two test borings during the field exploration program. Split-spoon soil samples were generally obtained at 5-foot intervals within the test borings. The soil samples were sealed in glass jars and placed in a refrigerated cooler to preserve them for possible laboratory testing.

5.20 GROUNDWATER SAMPLING

After allowing the newly installed wells to stabilize for approximately two weeks, GZA conducted one round of groundwater and surface water quality sampling and analyses, on August 24, 1986. Groundwater levels were measured in each well prior to sampling and are presented in Table 2. Separate, (i.e., one per well) pre-cleaned stainless steel bailers with Teflon ball-check valves were dedicated for use at each well to avoid cross contamination. The first bailer volume was poured into a glass beaker to check for the presence of a floating layer. An amount at least three times the initial volume of water in each well was then evacuated to remove stagnant water. The wells were subsequently allowed to recharge prior to sampling. No floating layer of petroleum product was observed in the groundwater samples. Samples were screened in the field for pH, temperature, and specific conductance during the sample round, the results of which are presented as Table 3.

Samples collected on August 24, 1986 were submitted to an outside laboratory for analyses for priority pollutant volatile organic compounds (VOC's), ammonia, free cyanide, and free cyanate. After filtering in the field, aqueous cyanide and cyanate samples were preserved with ascorbic acid and sodium hydroxide while aqueous ammonia samples were preserved with sulfuric acid. All samples were stored in a refrigerated cooler until delivery to the laboratory.

Groundwater analyses were conducted by Eastern Analytical Inc. (EAI) of Concord, New Hampshire. The written laboratory results of the chemical analyses performed are included in Appendix C while groundwater analytical results are discussed in Section 6.00.

5.30 SURFACE WATER SAMPLING

On August 24, 1986, GZA also collected two surface water samples, designated SW-1 and SW-2, from two locations along Stony Brook at the approximate locations indicated on Figure 1. Surface water sample SW-1 was collected upstream of the dam and surface water sample SW-2 was collected in a location downgradient of the subject site. Surface water samples were also collected using dedicated pre-cleaned stainless steel bailers with Teflon ball-check valves. Surface water samples were screened in the field by GZA for pH, temperature and specific conductivity (see Table 3), and were submitted to EAI for analyses for VOC's, ammonia, free cyanide and free cyanate. Surface water samples analyzed for ammonia, free cyanide and free cyanate, were filtered and preserved in the same manner as groundwater samples.

6.00 SAMPLE SCREENING AND ANALYTICAL RESULTS

The selection of ammonia, free cyanide, and free cyanate as analytical parameters for groundwater and surface water samples collected for this study was made in concurrence with State officials based upon information currently available concerning reported disposal of cyanide case-hardening salts at the site. Free cyanide is an indicator of leachable cyanide from the case-hardening salts. Ammonia and free cyanate are considered to be indicators of potential chemical breakdown products of cyanide. Analyses for VOC's were also included in this study since these compounds are considered common indicators of the presence of hazardous materials.

6.10 SOIL SAMPLE SCREENING

Soil samples retrieved from the test borings were screened in GZA's laboratory for total concentrations of volatile organic compounds (VOC's) using an Analytical Instruments Development, Inc. (AID) Model 580 photoionization organic vapor meter (OVM). The AID OVM responds readily to most synthetic organic contaminants but does not register methane or natural components of air such as oxygen, nitrogen and carbon dioxide. The AID OVM detection limit is approximately 1 part per million (ppm), referenced to the butadiene in-air standard. The AID OVM did not detect the presence of VOC's in the soil samples obtained from test borings GZ-1 and GZ-2.

6.20 GROUNDWATER AND SURFACE WATER SCREENING AND ANALYSES

6.21 Field Screening for Inorganic Parameters

Groundwater and surface water samples were screened in the field for pH, specific conductance, and temperature. The results of the screening are summarized in Table 3. The observed pH levels on August 24, 1986 were 6.0 in the groundwater sample collected from monitoring well GZ-1 and 5.9 in the groundwater sample collected from monitoring well GZ-2. Specific conductance of groundwater samples was observed to be 380 at well location GZ-1 and 230 at well location GZ-2. The temperature of the groundwater samples from monitoring wells GZ-1 and GZ-2 was observed to be 15 degrees celsius (C). The specific conductance of surface water samples SW-1 and SW-2 was observed to be 60 for both samples, and the pH values were observed to be 6.3 for SW-1 and 6.2 for SW-2, respectively. The temperature of surface water samples SW-1 and SW-2 was observed to be 17 degrees C for both samples. These observed values of pH, specific conductance and temperature are considered to be representative of groundwater and surface water in developed areas of New Hampshire.

6.22 Ammonia

Results of analyses for ammonia, which are summarized in Table 4, indicate concentrations of 1.1, 0.66, 0.06 and 0.07 milligrams per liter (mg/l) in the groundwater samples obtained from monitoring wells GZ-1 and GZ-2 and surface water samples SW-1 and SW-2, respectively.

6.23 Free Cyanide and Free Cyanate

Results of analyses for free cyanide indicate a concentration of 0.66 mg/l in the groundwater sample obtained from monitoring well GZ-2. Free cyanide was not detected in the groundwater sample obtained from monitoring well GZ-1. It is noted that the detection limit for the laboratory analysis performed was 0.02 mg/l. Free cyanate was detected in the groundwater samples collected from monitoring wells GZ-1 and GZ-2 at concentrations of 0.25 and 0.74 mg/l, respectively.

Free cyanide was not identified in surface water samples SW-1 and SW-2 to the detection limit of 0.02 mg/l for the analyses performed. Free cyanate was detected in each of surface water samples SW-1 and SW-2 at a concentrations of 0.10 mg/l.

The detected concentration of free cyanide in monitoring well GZ-2 exceeded the current maximum contaminant level (MCL) of 0.01 mg/l adopted for this compound by the New Hampshire Department of Environmental Services (DES). A groundwater quality criterion for free cyanate is currently not available.

6.24 Volatile Organic Compounds

The groundwater samples obtained from monitoring wells GZ-1 and GZ-2 and surface water samples SW-1 and SW-2 were analyzed for VOC's by EAI. VOC's were not detected in the groundwater and surface water samples analyzed. Written laboratory results are contained in Appendix C.

7.00 CONCLUSIONS AND RECOMMENDATIONS

7.10 CONCLUSIONS

With respect to the geophysical reconnaissance, it is GZA's opinion that the presence of an iron railing, the former mill raceway, and nearby overhead electrical wires in the immediate vicinity of the suspected cyanide disposal site prevented the magnetic survey from being a substantially viable method of locating buried drums or other metallic objects within the site.

Results of laboratory analyses indicate that priority pollutant volatile organic compounds (VOC's) were not detected in site overburden soils, in groundwater samples from monitoring wells GZ-1 and GZ-2, or at the two surface water sampling stations located along Stony Brook. These data suggest that VOC's may not be present at the suspected cyanide disposal area.

Results of laboratory analyses performed for this hydrogeologic assessment indicate, in GZA's opinion, that free cyanide is present within a portion of the groundwater regime adjacent to the southwestern section of the suspected cyanide disposal area. The concentrations of free cyanide detected in the groundwater sample obtained from monitoring well GZ-2 exceeded the current MCL adopted by the DES for this compound. Available groundwater level data as developed for this study indicate that monitoring well GZ-2 is likely located hydraulically downgradient of a portion of the suspected cyanide salt disposal area. Free cyanide was not detected in the groundwater sample obtained from monitoring well GZ-1 within the limits of detection of the analytical techniques employed.

Based on studies conducted and observations made as part of this hydrogeologic assessment, it is also GZA's opinion that free cyanate and ammonia are also present within the groundwater regime beneath the area adjacent to the western section of the

suspected cyanide disposal area. MCL criteria are currently not available for free cyanate and ammonia, both of which are potential breakdown products of cyanide. The observed concentrations of these two compounds were generally within an order of magnitude of the observed concentrations of free cyanide, as would be anticipated.

Results of EAI's analyses indicated that free cyanide was not detected in the two surface water samples collected from Stony Brook, within the limits of detection of the analytical techniques employed. EAI data also indicated that free cyanate and ammonia were detected in surface water samples SW-1 and SW-2 at similar concentrations. The detected concentrations of these two compounds in the two surface water samples were lower than those observed in groundwater samples. Because free cyanate and ammonia were detected at similar concentrations at both upgradient location SW-1 and downgradient location SW-2, it is GZA's opinion that the observed concentrations of these two compounds may be representative of background levels in Stony Brook at the time of sampling.

GZA's observations of groundwater levels in the monitoring and observation wells indicate that groundwater flows in a general southeasterly direction across the site area toward Stony Brook. Groundwater and surface water level data developed for this study also indicate the presence of localized groundwater flow variations in the vicinity of the old dam which are believed to be due to the impoundment of water behind this structure. The available groundwater and surface water data suggest that a radial groundwater flow pattern exists in the vicinity of the dam as indicated on Figure 1.

As previously indicated, this general area of Wilton is serviced by municipal water and sewer. In consideration of these factors and based upon the available data, it is GZA's opinion that the cyanide identified within the groundwater regime in the vicinity of the suspected cyanide disposal area likely does not pose a significant public health threat. This opinion is based on currently available analytical and hydrogeologic data as summarized herein, and the understanding that there are no municipal water supply wells or private water wells within at least 1 mile of the site in a general downgradient direction.

It is GZA's opinion that the results of the surface water (i.e. Stony Brook) quality analyses indicate that the case-hardening salt burial area is not significantly impacting the water quality of Stony Brook and that such data may be indicative of attenuation effects of the brook including dilution and biological and chemical breakdown of the buried wastes. Further instream attenuation would occur where Stony Brook enters the Souhegan River, approximately 150 to 200 feet downstream from the site.

7.20 RECOMMENDATIONS

It is recommended that the sampling and laboratory analytical work for ammonia, free cyanide, and free cyanate performed for this study be repeated on a semi-annual basis for a period of two years to provide for continued monitoring of the potential impact of the suspected cyanide disposal area on the site area groundwater and surface water regimes. It is further recommended that these samples be collected at times when the groundwater levels are typically seasonally high and low, which is generally in April and October.

Further, GZA recommends that at least one of the four sampling and analysis rounds include groundwater samples from observation well GZ-3 in addition to monitoring wells GZ-1 and GZ-2. Groundwater and surface water samples collected should be screened in the field for pH, specific conductance and temperature and submitted to a water quality analytical laboratory for analyses for ammonia, free cyanide, and free cyanate as was done for this study. Assessment for the need for further water quality monitoring would be made upon completion of the four sampling rounds.

EXHIBIT 2



United States Environmental Protection Agency

Region 1

5 Post Office Square – Suite 100
Boston, Massachusetts 02109-3912

Removal Action Request

Please fill out the following to the best of your ability so that EPA's Emergency Response and Planning Branch can initiate our Time Critical Removal Preliminary Assessment/Site Inspection. When possible, provide analytical, property ownership and any community relations information that will facilitate our evaluation.

EPRB management will assign an On-Scene Coordinator (OSC) once we receive your request and you or your point of contact will be contacted by an OSC within a week

NOTE: If this is a release of oil and or hazardous materials contact the National Response Center 800-424-8802. The EPA Region One Duty On-Scene Coordinator will contact you to coordinate appropriate response actions.

Site Name: E.J Abbott Memorial Trust Site

Site Lat/Long: 42.844839, -71.739563

Site Address: Burns Hill Road, Wilton, NH

State POC/Contact Info: Scott Drew
NH Department of Environmental Services,
Hazardous Waste Remediation Bureau

Site Owner/Access Contact: E.J. Abbott
Memorial Trust; however, the trust has been
dissolved. Access contact is Paul
Branscombe, Town Administrator, Town of
Wilton

1. Priority Action Requested for EPA coordination/field deployment:

- ☐ "Urgent" requesting site evaluation 2-3 weeks
☒ Time Critical action within 2 months

2. Describe the site history, state actions, city/town actions to explain why the site is being referred to EPA:

History: The site includes two lots (Map J, Lot 103 and Lot 104-2) totaling 0.13 acres that are developed with a concrete surfaced walkway and retaining wall. Please note that the focus of any removal action would be on Lot 104-2 as no historic contamination has been identified on Lot 103. The site abuts Stony Brook and is approximately 200 feet upstream of the confluence with the Souhegan River. A concrete structure that may have contained the former water wheel of an adjacent dam underlies a portion of the walkway at Lot J-104-2. The structure is the location of historical disposal of sodium cyanide wastes that were generated at the nearby Abbott Machinery Company as part of the production of textile manufacturing machinery. Six 55-gallon drums and four furnace boxes containing spent sodium cyanide-case hardening solution were reportedly disposed in the structure circa 1964. In 1986, Goldberg-Zoino & Associates, Inc. (GZA) were contracted by the E.J. Abbott Memorial Trust to assess environmental conditions in the vicinity of the sodium

cyanide waste disposal area. Assessment activities included the installation of monitoring wells and collection of soil and groundwater samples proximate to the disposal area, as well as collection of surface water samples from Stony Brook. Ammonia, cyanide and cyanate were detected in the groundwater samples. Ammonia and cyanate were detected in the surface water samples. GZA recommended continued groundwater monitoring be conducted; however, additional monitoring activities were not completed. In 2002, Weston Solutions, Inc. completed Preliminary Assessment/Site Inspection (PA/SI) activities that included the installation of monitoring wells and collection of soil and groundwater samples in the vicinity of the disposal area, as well as sediment samples from Stony Brook and the Souhegan River. Cyanide was detected in one groundwater sample collected from a well located hydraulically upgradient of the sodium cyanide waste disposal area and in a soil sample collected from a rock wall located immediately downgradient of the disposal area adjacent to Stony Brook. In a Phase I Environmental Site Assessment (ESA) report (dated October 1, 2020) prepared on behalf of the Nashua Regional Planning Commission and the Town of Wilton, Credere Associates, LLC (Credere Associates) concluded that a material threat of release to the environment exists at the site due to the disposal of sodium cyanide waste in the subsurface concrete structure.

3. Describe COCs/ Identify Risks & Receptors. Background site conditions (reference prior reports if applicable):

Relative to the requested response action: As indicated in the reports referenced in Item 4, sodium cyanide wastes have reportedly been disposed in a subsurface concrete structure at the site. The structure is partially below the water table and adjacent to Stony Brook. Risks and receptors include degradation of the concrete structure over time, or the structure being compromised as a result of flooding events or during site redevelopment activities, which could lead to a release of contaminants to soil, groundwater and Stony Brook. Impacted surface water and sediment in the brook would provide potential exposure pathways to environmental and human receptors.

4. Sampling Data/Environmental Reports:

Key to the requested response action: Credere Associates' Phase I ESA report dated October 1, 2020 is accessible via NHDES' OneStop Database at: <http://www4.des.state.nh.us/IISProxy/IISProxy.dll?ContentId=4882153>. The Phase I ESA report contains GZA's Hydrogeologic Assessment report dated February 13, 1987 and Weston's PA/SI Report dated March 24, 2003 as appendices.

5. Environmental Reports (Y/N)

☒ Yes

☐ No

If yes, please identify and provide copies – see Item 4 above.

6. Regulatory/Enforcement Investigative History:

Relative to the requested response action: Weston completed PA/SI activities during 2002 on behalf of the US Environmental Protection Agency Region I, Office of Site Remediation and Restoration.

7. Ownership/Tenant Information (this information helps to expedite access):

- a. Title Information: The owner of record is the E.J. Abbott Memorial Trust; however, the trust has been dissolved. Local contact is Paul Branscombe, Town Administrator for the Town of Wilton.

Deed: Book 1638 Page 0363 Please provide a copy of current deed, if possible

*Also see Plan #25342 recorded August 28, 1991 for subdivision of the larger lot J-104 into lots J-104-1 and J-104-2. The site is lot J-104-2.

b. Ownership Information:

Current Owner: E.J. Abbott Memorial Trust

Contact information: Address, phone numbers, e-mail

The current owner of record is the E.J. Abbott Memorial Trust; however, the trust has been dissolved.

Current Operators/Tenants: None

Contact information: Address, telephone numbers, e-mail

There is no current operator/tenant.

Former Owners/Operators/Tenants: Addresses, telephone numbers, e-mails

E.J. Abbott Memorial Trust owned former Lot J-104 (which included what is now lot J-104-2) dating back to April 3, 1961. Historical records indicate that the Abbott Machine Company operated at Lot J-104 starting in 1961. The Whiting family owned Lot J-104 dating back to the late 1800s including David Whiting & Sons, Inc. from 1928 until transfer of the property to the E.J. Abbott Memorial Trust, Inc. on April 3, 1961.

8. Local Contacts (community activists, local elected officials, etc):

Local contacts include: Paul Branscombe, Town Administrator, Town of Wilton, WiltonTA@wiltonnh.gov and Jennifer S. Beck, Chair, Wilton Economic Development Team, jenniferscottbeck@gmail.com

9. Extenuating circumstances/Other issues?

Click or tap here to enter text.

Submitted by: Michael McCluskey
NH Department of Environmental Services
Hazardous Waste Remediation Bureau

Submitted by: Click or tap here to enter text.

UNITED STATES DISTRICT COURT
DISTRICT OF NEW HAMPSHIRE

IN THE MATTER OF THE
ADMINISTRATIVE WARRANT

In re: E.J. ABBOTT MEMORIAL SITE
Parcel ID: Lot J, 103 and 104-02
Wilton, New Hampshire

Case No. _____

ADMINISTRATIVE WARRANT

To: Any authorized employee, representative, contractor, or subcontractor of the United States Environmental Protection Agency and any United States Marshal for the District of New Hampshire:

The *Ex Parte* Application for an Administrative Warrant, submitted on behalf of the United States Environmental Protection Agency (“EPA”), demonstrates sufficient justification for entry onto, and remaining on, the following property known as the “Site”:

All property known as the E.J. Abbott Memorial Site located in the Town of Wilton, New Hampshire. The property is located at Burns Hill Road (Parcel Lot J, 103 and 104-02), Town of Wilton, New Hampshire. The property consists of approximately 0.13 acres. The current owner is the E.J. Abbott Memorial Trust, Inc., as recorded in the Hillsborough County Registry of Deeds at Book 1638, page 363.

This entry is authorized by Section 104(e) of the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), 42 U.S.C. § 9604(e), and is for the purpose of conducting response activities pursuant to Sections 104(a) and 104(b) of CERCLA, 42 U.S.C. §§ 9604(a) and 9604(b). The response activities to be taken at the Site comprise entry, inspection, collection of information, and taking samples, as authorized by Section 104(e) of CERCLA, 42 U.S.C. § 9604(e), and activities related thereto. These activities are necessary to investigate, evaluate, and address the release or threat of release of hazardous substances at the Site.

YOU ARE HEREBY AUTHORIZED TO: Enter on and into, move about, remain on or about, and re-enter as necessary, the Site at all reasonable times for the purpose of conducting the following response actions authorized by Sections 104(a), (b), and (e) of CERCLA, 42 U.S.C. §§ 9604(a), (b), and (e):

1. Conduct site walks to determine whether any hazardous substances are visibly present;
2. Survey the Site and take measurements of the topography of the Site to obtain information relevant to the selection of sampling locations on the Site;
3. Document and photograph conditions at the Site;
4. Collect soil, sediment, water and air samples, as may be necessary;
5. Sample any solids or liquids stored or disposed of on-site;
6. Drill or excavate holes for investigation of conditions under the ground surface; and
7. Take other actions related to the investigation of surface or subsurface contamination resulting from the release or threat of further releases at the Site.

ACCORDINGLY, IT IS ORDERED THAT:

All owners, occupants, and persons in control of the Site, including but not limited to the trustees, if any, of the E.J. Abbott Memorial Trust, Inc. shall permit the persons specified above to enter the Site for the purposes specified above.

A copy of this Warrant shall be left at the Site at the time of initial entry.

As a courtesy, a copy of this Warrant shall also be provided to Nick Germain, Town Administrator for the Town of Wilton, before or reasonably promptly after the time of initial entry, by delivering it by certified mail to:

42 Main Street
Wilton Town Office
Wilton, NH 03086

To enable EPA personnel or their agents to complete satisfactorily those actions specified above and authorized by Sections 104(a), (b), and (e) of CERCLA, 42 U.S.C. §§ 9604(a), (b), and (e), the duration of this Warrant shall be one hundred and eighty (180) days from the date of this Warrant.

The United States Marshal is authorized to assist EPA in such manner as may be reasonably necessary and appropriate to execute this Warrant and all provisions contained herein.

A prompt return of this Warrant shall be made to this Court showing that the Warrant has been executed and that the entry has been completed within the period of time specified above.

Jun 23, 2022

Date Issued

Audrea K. Mistone



United States Magistrate Judge